

The Amorium Project:
Excavation and Research in 2002
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THE 2002 CAMPAIGN season lasted for eight weeks, from 24 June through 15 August.¹ The team comprised some forty-one members from seven different countries and included archaeologists, conservators, geophysicists, surveyors, and architects, as well as students from five Turkish universities.² We were joined by a workforce numbering up to thirty-five local men, many of whom have worked at Amorium for a good many years and so contribute significantly to the work with their skill, expertise, and enthusiasm. The plans for the season's work included a full program of excavation, study, recording, and conservation. As in previous years, excavation focused on the Lower City enclosure, with special emphasis on the area within and immediately surrounding the bathhouse complex, which was first revealed in 1998 and 2001. In addition, after a lull of several years, attention was again directed to the Lower City church with the intention of carrying out further excavation and also initiating a new conservation project. Finally, as part of the site enhancement program, the entire area around the church was landscaped and provided with new fencing, while at the Dig House great progress was made in reorganizing and expanding the available storage space.³

1 For a brief preliminary report on the season, see C. Lightfoot, "Amorium 2002," *Anatolian Archaeology: British Institute of Archaeology at Ankara; Research Reports* 8 (2002): 11–12. A preliminary report in Turkish has also been published; C. S. Lightfoot and Y. Arbel, "Amorium Kazısı, 2002," 25. *Kazı Sonuçları Toplantısı*, 26–31 Mayıs 2003, Ankara (Ankara, 2004), 1:1–12. Other recent publications include M. A. V. Gill, *Amorium Reports, Finds*, vol. 1, *The Glass (1987–1997)*, with contributions by C. S. Lightfoot, E. A. Ivison, and M. T. Wypyski, BAR International Series 1070 (Oxford, 2002); C. S. Lightfoot, "Life and Death at Byzantine Amorium," *Minerva* 14.2 (2003): 31–33; C. S. Lightfoot and Y. Arbel, "Amorium Kazısı 2001," 24. *Kazı Sonuçları Toplantısı*, 27–31 Mayıs 2002, Ankara (Ankara, 2003), 1:521–32; see also C. S. Lightfoot, "Byzantine Anatolia: Reassessing the Numismatic Evidence," *RN* 158 (2002): 229–39.

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Visitors to the excavations included Prof. Dr. Peter Kuniholm and the Cornell University dendrochronology team, Prof. Dr. Thomas Drew-Bear, Gina Coulthard (London Secretary of the British Institute of Archaeology at Ankara), Mr. Lloyd Erikson, Sayın Hüseyin Tanrıku, and Sayın Can Yardımcı. The Amorium Project gratefully acknowledges the continued support of the Turkish authorities in Ankara, Afyonkarahisar, and Emirdağ, the British Institute of Archaeology at Ankara, Dumbarton Oaks, Washington D.C. (on behalf of the Trustees of Harvard University), and The Metropolitan Museum of Art, New York. Additional funding came from an anonymous American source. The Amorium Project is enormously grateful for this generous funding, and we would like to thank ARIT—American Research in Turkey (especially Prof. Kenneth Sams and Nancy Leinwand), and the Wells Fargo Bank Minnesota (especially Mr. Paul Schwartz) for their kind assistance in this respect. Thanks also go to the many friends and supporters of the Amorium Project; they include Dr. Neil Christie (University of Leicester), Dr. Stanley Ireland (University of Warwick), Prof. Dr. Thomas Drew-Bear (CNRS, France), Dr. Marlia Mango (University of Oxford), Prof. Stephen Mitchell (Exeter University), and Dr. Carlos A. Picón, Lisa Pilosi, and Mark T. Wypyski (The Metropolitan Museum of Art, New York). The 2002 season would not have been so successful without the generous help of Dr. Adil Özme (Government Representative, General Directorate of Monuments and Museums, Ankara); Sayın Seracettin Şahin

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3 More shelving was also added to the second, larger stone depot.

It is not possible here, in a preliminary report, to give a full account of the results obtained in 2002. Rather, certain aspects of the season's work have been selected in order to provide an adequate summary of some of the more significant discoveries.

The Lower City Enclosure, Trench XC (by Y. Arbel, E. A. Ivison, and C. S. Lightfoot)

Work in Trench XC in 2002 concentrated on completing the excavation of the bathhouse (Structure 1) and the polygonal hall (Structure 3) and the investigation of areas adjacent to the complex to the east and west. Within the bathhouse the rooms previously identified as the *tepidarium* and the *caldarium* were completely exposed (fig. 1).⁴ An additional room containing a hypocaust system was discovered at the western end of the bathhouse, together with an almost perfectly preserved channel that provided heat to the main bathing rooms. In addition a chamber attached to the western end of Structure 1 was fully excavated and identified as the *prae-furnium*, or furnace room, of the complex. The excavation of the northern section of the polygonal hall was completed, so that the whole of the interior and all its exterior walls were exposed. Although the stone foundations of several structures were discovered in the immediate vicinity of the complex, none of these buildings appeared to be contemporary with or functionally attached to the baths. Further work is required before a full description and interpretation of these structures can be offered.

4 DOP 58 (2004): 359–60.

Structure 3: The Polygonal Hall

The excavation of the northern section of the interior of the hall revealed one further apse flanked by two niches, identical in dimensions and style to the five others unearthed during the previous season. Originally the hall had three doorways: two on the same northeast–southwest axis leading to the exterior of the complex, and a third doorway to the south that gave access to the bathhouse proper. As in the other parts of the polygonal hall, the fill (Context 303) that covered the northern section from wall tops to the level

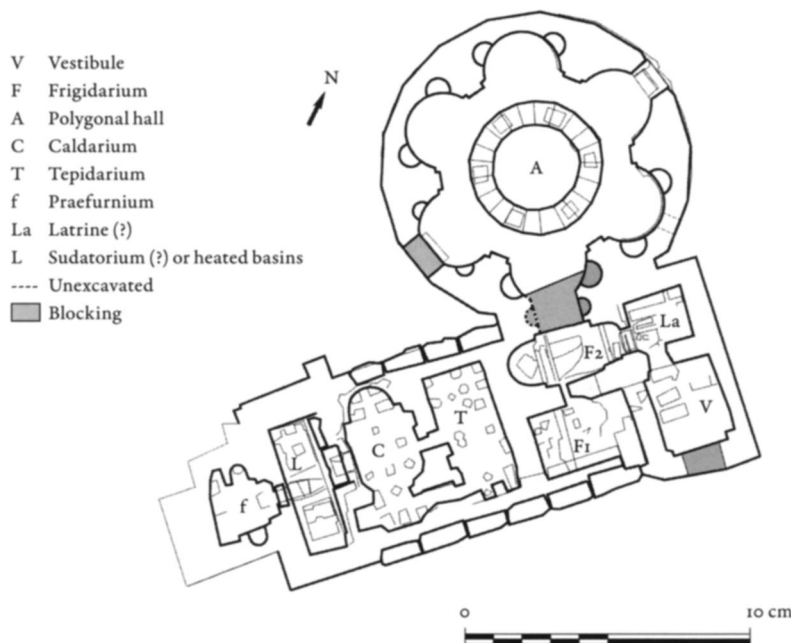


Fig. 1 The early Byzantine and Dark Age bath complex, Structure 1 and the polygonal hall (drawing: G. Tompsett and C. Evans)

of the missing floor surface contained debris from the building's own stone and brick masonry. This included fragments of brick vaults that probably spanned the ambulatory between the walls and the central stylobate, as well as additional fragments from column shafts and a sixth basket-shaped capital decorated with crosses and raised bosses (fig. 2).⁵ No evidence was found of later architecture or surfaces. The upper layers of fill produced another eleventh-century coin to add to the three recovered in 2001.⁶ As in the previously excavated sections of the hall, the floor was missing but its foundation bed (Context 308) contained concentrations of Late Roman C ware dating from the sixth to early seventh centuries.⁷

Further investigation of the foundations of the polygonal hall was conducted both inside the building (Context 384) and by its eastern and western outer walls (Contexts 355 and 385). These soundings have shown that the exterior superstructure of the hall comprised eighteen sides, constructed upon a circular foundation of three brick courses above several courses of stone (fig. 3). The walls and floors of the polygonal hall had been thoroughly stripped of their marble facings before the building was abandoned. Excavation in the adjacent bathhouse (Structure 1) revealed numerous fragments of *spolia* marble

5 All six capitals, belonging to columns sited on the circular stylobate, were thus accounted for: T1557, T1559, T1560, T1563, T1565 (all from 2001), and T1590 (2002). Exact parallels for the Amorium capitals have been hard to find, but compare a massive capital bearing the monogram "Phocas," now in the garden of the Afyonkarahisar Archaeological Museum: E. Parman, *Ortaçağda Bizans Döneminde Frigya (Phrygia) ve Bölge Müzelerindeki Bizans Taş Eserleri* (Eskişehir, 2002), 180, no. A54, pl. 105/135 (undated, but probably 6th–early 7th c.). There is also a Justinianic capital from Constantinople; see R. Kautzsch, *Kapitellstudien: Beiträge zu einer Geschichte des spätantiken Kapitells im Osten vom vierten bis ins siebente Jahrhundert* (Berlin, 1936), 191, no. 618, pl. 38.

6 SF4345: AE anonymous follis, class B, dated ca. 1030/35–42?, 38.5–37 mm; 16.57 g, 6h; see *DOP* 58 (2004): 358 and n. 15.

7 The pottery has not yet been studied in any detail. One should note, however, that this context also produced two anonymous folles—SF4344: class A2, var. 1a, dated 976?–ca. 1030/35; 29.5–26 mm; 8.71 g; 5h; and SF4343: class B, dated ca. 1030/35–1042?; 29.5–28 mm; 9.42 g; 6h.

Fig. 2 Trench XC, polygonal hall, Context 308, fallen columns and capital in situ to north side of stylobate (AM02/01/24; photo: C. S. Lightfoot)



Fig. 3 Trench XC, Context 383, buildings to west of the polygonal hall, looking southeast, showing circular foundations of polygonal hall to left (AM02/05/02A; photo: C. S. Lightfoot)



slabs that had been used to refurbish its interior. To judge from the fortunate survival of one slab in particular, many if not all of these marbles were probably salvaged from the polygonal hall. The slab had been reused in the tepidarium, but its curvature was found to be a perfect fit against the circular stylobate of the polygonal hall, thus indicating that it had originally formed part of that pavement.⁸ This evidence further indicates that the refurbishment of the bathhouse (Structure 1) took place at the same time as the abandonment of the polygonal hall. Once the hall had been stripped of all reusable materials, the communicating doorway between the two parts of the complex was blocked and the polygonal hall left derelict. The salvaged marbles were then transferred to the bathhouse (Structure 1), which continued to function for an extended period of time.

Two sondages were dug within and immediately outside the polygonal hall to investigate the continuation of a drain that had been exposed in 2001 in the northeast corner room of Structure 1 (fig. 1, room La).⁹ Sondage 5 inside the east apse of the hall revealed the robbed-out remains of a semicircular feature that filled the entire apse. To judge from its remains, this feature was most probably a water basin or tank. The interior had once been lined with marble revetment over an *opus signinum* lining. A narrow opening in the center of the back wall that led outside the building may be interpreted as a water channel, either to supply or empty the basin. This opening was later blocked with mortar and rubble masonry when the building was stripped and abandoned. Along with fragments of pottery, five bronze or copper coins were also found at the bottom of the robbed feature. Although four of these coins were illegible, the remaining example has been identified as a class 2 follis of Leo IV, dated 770–80.¹⁰ This find strongly suggests that the polygonal hall was completely or partially standing in the late eighth century, and it provides a terminus ante quem for its robbing and abandonment. The other sondage, designated no. 4, was immediately outside the eastern apse, in the junction between the polygonal hall and the northern corner of the bathhouse. In addition to revealing more of the circular foundations to the polygonal hall, the sondage brought to light a shallow channel that fed into a larger conduit or drain, lined and capped with large stone blocks. The conduit emerged from under the northeastern corner of Structure 1 and ran off in a northerly direction. Both this and the shallower channel that led from the polygonal hall were later deliberately blocked up with large pieces of spolia.

Structure 1: The Bathhouse

With the removal of the dense stone fills on which a number of middle Byzantine installations (Contexts AM01/145, 153, 154, and Context 318) were later constructed, the interior layout of Structure 1 was fully exposed, revealing a series of interconnecting rooms. The existence of hypocaust systems under the floors of two of these rooms permits their identification as the caldarium and tepidarium respectively (fig. 1, rooms C and T).¹¹ Room C may be identified as the caldarium because of its location closer to the furnace room or praefurnium, the source of the supply of hot air and water. The caldarium measures 5.10 × 2.80 m. The adjacent tepidarium (room T) is of similar dimensions, measuring 5.10 × 2.60 m. The suspended floors in these rooms did not survive, but substantial remains of the hypocaust system were discovered in situ in both chambers. Thirteen *pilae* survived in the caldarium, and twenty remained in the tepidarium (fig. 4). Imprints on the surface of the hypocaust floor marked the location of pillars that have not been preserved. The arrangement of the *pilae* across the

8 Note the cutback lip around the outer edge of the stylobate in fig. 2, and the complete absence of the surrounding floor surface.

9 This room has previously been identified as possibly being the baths' latrine; see *DOP* 58 (2004): 361.

10 SF4500: AE follis, class 2 of Leo IV, dated 778–80; 24–22 mm; 4.40 g; 6h; *DOC* 6.

11 Standard letter designations for the various rooms have been adopted for use here: F. Yegül, *Baths and Bathing in Classical Antiquity* (New York, 1992), ix.

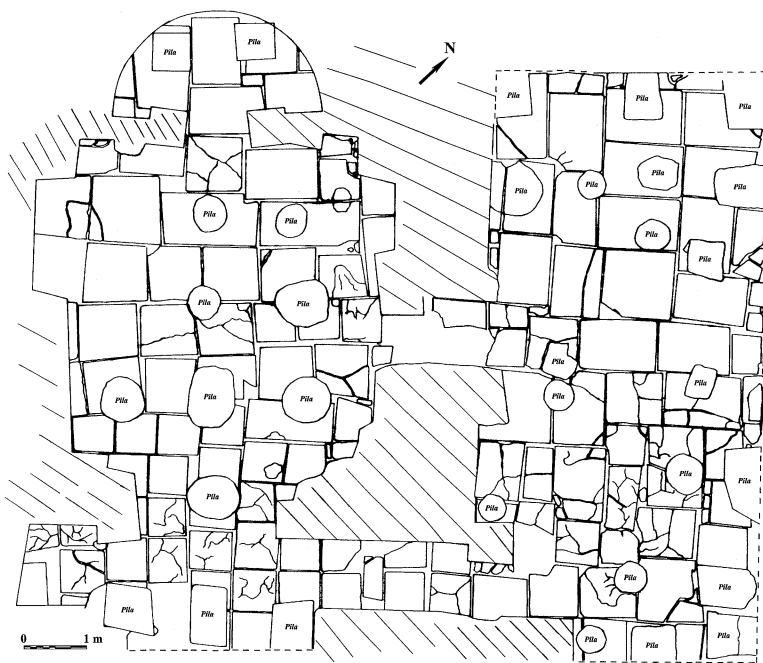


Fig. 4 Structure 1, state plan of the hypocaust floors and *pilae* in rooms C and T (drawing: İ. Koçak and T. Koçak)

floor in both chambers did not conform to a regularly spaced symmetrical grid, and several *pilae* had been placed side by side. In addition, at least six different forms of *pilae* are represented. Along with pillars built up from carefully laid courses of square or circular tiles, reused terracotta pipes and masonry spolia were also utilized (fig. 5), as well as, in one case, a small marble column. The *pilae* average 0.70 m in height and 0.35 m in diameter. The almost haphazard way in which some of the *pilae* have been constructed and installed contrasts markedly with the carefully laid floor of the hypocaust, which consists of large square tiles, measuring 0.55 × 0.55 m (fig. 4). The *pilae* stood on this surface and were not integral to its construction.

Two passages were discovered linking the hypocaust chambers. One was located at the center of the dividing wall and the other at the southern extremity. The southern passage, measuring 0.75 m wide, is better preserved. In its original form it was covered by a brick arch, of which only the springing remains. The



Fig. 5 Trench XC, Structure 1, details of hypocaust pillars in the tepidarium, looking northwest (AMo2/05/25A; photo: C. S. Lightfoot)

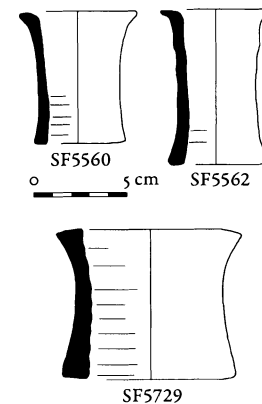
hot air from the praefurnium to the west (fig. 1, room f, and see below, p. 239) was directed through these passages from the caldarium to the tepidarium. The hot air may then have been funneled away through an arched passageway on the southern exterior wall, although the arch's dimensions (1.30 m in height, 1.05 m in width) seem too large for this purpose. Whatever its original function, the arch was subsequently walled up with rubble masonry.

The excavated fills within the two rooms were very similar, implying that the layers are the products of the same process or event. Upper accumulations (Contexts 311 and 325) included ash-streaked soil with thick concentrations of stone, mortar, and tile debris, as well as many fragments of white marble, most of which probably derived from the collapse of the suspended floors and wall revetment.¹² The layers in the tepidarium contained relatively few vessel sherds, but they did produce numerous examples of fragmentary and intact terracotta cylinders. These hollow tubes were formed on a potter's wheel and have an average length of 7 cm and a diameter of 5 cm. Similar objects, but of a larger size (with dimensions of 7 × 10 cm), were found in the caldarium, where the concentration of vessel fragments was greater (fig. 6).¹³ These objects are comparable to a number of terracotta "spacers" that have been excavated at Roman bathhouses in Britain and Romania, where they were used to create wall-flues behind marble revetment.¹⁴ However, much closer parallels are to be found in the early Byzantine baths at Corinth and Anemurium.¹⁵

The tiled floor of the hypocaust in both the caldarium and tepidarium was covered with a dense, compacted layer of black ash, measuring 0.15–0.30 m thick (Contexts 312 and 332). Most of the ash was produced probably during the operation of the heating system, but the presence of marble debris, pottery, and spacers mixed with ash within the hypocausts indicates that some of this deposit could be associated with the collapse and abandonment of the building's interior. Possible evidence for a violent end for the bathhouse may be supported by the unusual discovery of the upper part of a human skull within the debris (Context 306) in the southern passage between the caldarium and tepidarium hypocausts.

At the western end of Structure 1 a narrow, rectangular chamber, measuring 4.90 × 1.70 m, was exposed between the praefurnium and the caldarium (fig. 1, room L). Below floor level it was divided into two hypocausts by a carved-out stone channel, measuring 1.50 × 0.30 × 0.40 m, and covered over with stone slabs, one of which was found still in situ. The channel funneled hot air from the praefurnium into the hypocaust below the caldarium and from there into the tepidarium. Hot air was also channeled into the hypocausts below room L through two round holes, measuring 15 cm in diameter, cut into the sides of the stone channel. These hypocausts are structurally similar to the system beneath the two larger rooms (rooms C and T), but their floors are approximately 0.20 m higher than those of the adjacent caldarium. Eight pilae were exposed in the northern half of the chamber, and five were unearthed in the southern hypocaust. Fortunately, these smaller hypocausts preserve features that have not survived in the main rooms of the bathhouse. The northern hypocaust contains a well-preserved square tile pila, measuring some 0.80 m high and built of tiles measuring 30 × 30 cm and 5 cm thick. The southern half of the chamber provides a full cross section of the hypocaust and the suspended floor above. The floor consisted of marble slabs fitted into a 5 cm-thick layer of mortar superimposed on a layer of large tiles approximately 15 cm thick. The layer of tiles was directly supported by the 0.80 m-high hypocaust pillars, which stood over the well-preserved tile-floor surface. The fills within the

Fig. 6 Examples of terracotta spacers from Structure 1, rooms C and T (drawing: P. Pugsley)



¹² Context 311 also produced a coin of Nikephoros II—SF4342: AE follis, class 1, dated 963–69; 28–25 mm; 5.43 g; 5h. This should be noted alongside the four other folles of the same emperor recovered during excavations in the bathhouse in 2001: *DOP* 58 (2004): 364 and n. 42.

¹³ For the spacers, see O. Koçyiğit, "Terracotta Spacers from the Bathhouse at Amorium," *AnatSt* 56 (2006), forthcoming. Several vessels and sizable fragments were also recovered from sondages in the hypocaust chambers in 2001: *ibid.*, 360.

¹⁴ J. H. Money, "Exhibits at Ballots, 1: Clay Spacers from the Romano-British Bath-House at Garden Hill, Hartfield, Sussex," *AntJ* 54.2 (1974): 278–80; see also Yegül, *Baths and Bathing*, fig. 455d, and 465 n. 26, where it is regarded as a "simple wall-heating system."

¹⁵ J. C. Biers, *The Great Baths on the Lechaion Road*, vol. 17 of *Corinth* (Princeton, N.J., 1985), 78, nos. 113–15, fig. 4 and pl. 31/b; G. D. R. Sanders, "A Late Roman Bath at Corinth," *Hesperia* 68 (1999): 473, nos. 25–26, fig. 17 (with further comment on their function on pp. 453 and 461). Despite the fact that the Anemurium examples were found in the heated rooms of a baths, they were identified as "pot stands"; see C. Williams, *Anemurium: The Roman and Early Byzantine Pottery* (Toronto, 1989), 103–4, nos. 600–602, fig. 63 (five examples similar to no. 602 also appear in pl. 24). For some real amphora stands, found at Allianoi (Yortanlı), see A. Yaraş, "1998–1999 Bergama Yortanlı Barajı Kurtarma Kazısı," *11. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu*, 24–26 Nisan 2000, Denizli (Ankara, 2001), 111 and pl. 12.

compartments (Contexts 365 and 375) were also similar to those encountered in the other rooms.

Although very little of the superstructure of room L survives, we must assume the existence of a doorway connecting it to the caldarium. Later reconstruction in this area has also obscured the details of its arrangement.¹⁶ However, it is clear that the western wall of room L must have formed the exterior wall of Structure 1 and was pierced only at basement level by the opening that led from the furnace room to the hypocaust system. Two building phases are visible in the hot air channel between room L and the praefurnium. Originally this vent took the form of a brick arch, but it was subsequently narrowed by the insertion of a frame of spolia stone blocks, creating a square opening measuring 0.40 × 0.40 m. A tufa block that once formed part of an early Byzantine lintel was reused as the upper element of this frame (figs. 7, 8). It is decorated with a chi-rho monogram, flanked with vine tendrils and bunches of grapes, and may be dated stylistically to the fifth or sixth century.¹⁷ The decoration, however, was not visible during the period of reuse since the block was turned upward and buried in the wall.

Room L should perhaps be identified as forming a small *sudatorium*, or “sweating room.”¹⁸ An alternative interpretation is that the chamber was used for hot water basins or tanks.¹⁹ The raised height, small size, and apparent inaccessibility of room L make the latter a distinct possibility, although no

16 These features will be discussed in detail in the final report on the Amorium bathhouse, now being prepared by Oğuz Koçyiğit.

17 T1605: length 1.06 m, width 0.33 m, depth 0.545 m, diameter of medallion with christogram 0.15 m.

18 According to Vitruvius (*De arch.* 5.10.5), *sudationes* should be located next to the tepidarium and be circular in plan with a dome. However, such rules may not have been applied consistently, especially in baths constructed at a much later date, as in the case of the Amorium example.

19 For heated pools, see Yegül, *Baths and Bathing*, 356–65, 368–74. Compare also the west cubicle of the caldarium in the Panayia Field baths at Corinth; Sanders, “Late Roman Bath,” 454–55.

Fig. 7 Trench XC, Structure 1, bathhouse praefurnium, looking east southeast; at left, possible sweat rooms to either side of vent into the caldarium. T1605, used as top to air vent, is immediately to the right of its number (AM02/05/35A; photo: C. S. Lightfoot).

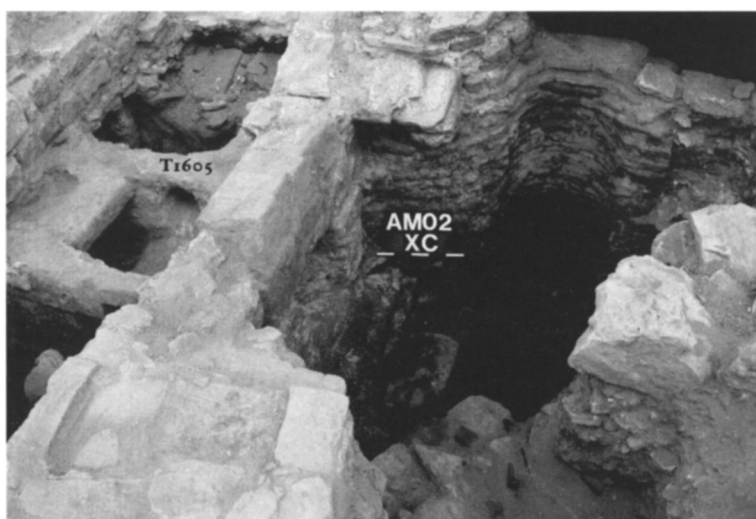


Fig. 8 Trench XC, Structure 1, T1605, reused lintel in situ. Note mortar adhering to decorated surface at left (AM02/02/31; photo: C. S. Lightfoot).

appreciable accumulation of lime scale has been noted on the marble floor slabs found in situ. In either case, room L was clearly the hottest part of the entire baths since it is located in direct proximity to the praefurnium, sharing a common wall along its western side.

Another chamber, designated room f, projects from the westernmost end of the bathhouse (figs. 7 and 1, room f). The precise size and configuration of the room cannot now be ascertained since its western wall has in large part been robbed out. Two small semicircular niches, measuring 0.65 m in diameter, let into the north and south walls. The design and contents of this chamber support its identification as a praefurnium or furnace room. In form, room f appears very much like a small basement room attached to the side of Structure 1. Indeed, the relative isolation of room f from the rest of Structure 1 may have been intended as a safety precaution in the event of a fire. The floor of the chamber is significantly lower than the suspended floors in the bathhouse, corresponding approximately to the level of the hypocaust pavements. An opening in the eastern wall of the chamber leads directly to the hot air channel that connects to the hypocaust system of the bathhouse. A small installation in the form of a box of vertically placed tiles (0.40 × 0.30 × 0.20 m) was found within the northern niche. This feature may be the only surviving fixture of the praefurnium itself and perhaps served as a firebox or base for a boiler.²⁰ The fill over the chamber's floor surface contained hard lumps of clay as well as a thick, dense layer of ash (Context 379), significantly more compact than the ash layers in the hypocausts within Structure 1. This layer probably resulted from a gradual accumulation of ash deposits caused by firing the furnace over an extended period of time rather than from a single destructive event. It was found to contain a single, badly corroded coin, identified as a follis of Constans II, dated circa 651/52.²¹

Conclusions

In combining the results of the three seasons of excavation in Trench XC (1998, 2001, and 2002), the following chronological sequence can be proposed for Structures 1 and 3.

PERIOD 1

During the sixth century, the area represented in Trench XC witnessed the construction of a monumental complex, designated as Structures 1 and 3, probably standing on its own in an open area or courtyard. These structures were well constructed with mortared stone and brick courses and featured finely carved marble fixtures and furnishings. Architecturally, aspects of Structures 1 and 3 compare favorably with other buildings constructed at this time in the Roman East and show considerable technical sophistication and richness of materials.²² Structurally these two buildings were contiguous and were built at the same time as part of a single plan. It is also clear that from the outset this complex functioned as a bathhouse, since the original east–west walls of Structure 1 were built with brick insulation on their interior faces, suggesting that heated rooms were located within its walls. It is even possible that some parts of the hypocausts, such as their tiled pavements or the tile pilae, survive from this period. In this interpretation, the polygonal hall may have served as an elaborate entrance hall or apodyterium, where bathers could relax, socialize, and enjoy the water features therein.

20 For comparanda, see Yegül, *Baths and Bathing*, 369.

21 SF4462: AE follis, class 5; 25–18.5 mm; 4.31 g.; ?h.; compare *DOC* 69a–e. The obverse is completely corroded, but the large M (not M) and, to the right, N/Ε/Ο/ς are quite legible on the reverse.

22 For comparanda, see Sanders, "Late Roman Bath," 473–75 and fig. 18.

Sometime after its completion (and, presumably, after an intervening period of use) the bath complex underwent a radical overhaul. The polygonal hall was systematically stripped of its furnishings (marble paving, revetment, and other decoration), and all doorways and external connections (water channels, pipes) were deliberately sealed up. The fact that very little of the marble wall revetment and none of the paving (either in the ambulatory or central area) was found *in situ* attests to the systematic way in which the polygonal hall was pillaged for materials. The coin of Leo IV from the robbed feature in the east apse certainly suggests that the interior decoration was stripped before the last quarter of the eighth century. The polygonal hall was never restored but was left as a derelict shell to fall into ruin over the subsequent years. The discovery in the ruins of the fallen column shafts, capitals, and entablatures indicates that the fabric itself was simply left to decay. Within the surviving shell of the polygonal hall, no signs were detected of any violent destruction or fire damage. Its abandonment may therefore be attributed to one of two causes: either the polygonal hall became unsafe because of some structural failure, or a combination of social and economic circumstances led to its abandonment.

It has not yet been determined whether Structure 1 was left derelict for a time before it was refurbished. The extensive refurbishment of Structure 1 suggests some major event, but the surviving archaeological remains give no hint as to what. Although the basic layout of rooms within the bathhouse probably remained unchanged, major repairs and modifications were undertaken. The building materials associated with this phase were exclusively spolia and were used to strengthen, recondition, and subdivide the structure. For example, additional pilae reusing terracotta pipes and stone elements were employed to replace and strengthen the hypocausts in the caldarium and the tepidarium. Likewise a certain amount of material from the polygonal hall was utilized—principally, it would seem, elements from the marble floor and wall revetment, which were incorporated into the rooms of the bathhouse. In addition, spolia from other ruined structures were inserted, as evidenced by the fragmentary lintel block decorated with a christogram reused to narrow the hot air channel from the praefurnium (T1605; fig. 8). Although further study of the finds is needed to determine the duration of period 2, the discovery of a follis of Constans II (dated 651/52) in the ash layers of the praefurnium would support the use of the bathhouse in the seventh century, if not into the eighth.

The 2001 report pointed out the relative scarcity of literary or archaeological evidence for baths and bathing in Byzantine times.²³ A recent study of the circumstances of the executions of the forty-two martyrs of Amorium, however, has drawn attention to the description in the *Martyrion* texts, written within decades of the events, of the conditions of their six-and-a-half-year imprisonment, apparently at Tarsos.²⁴ The prisoners were kept, it seems, in shackles in a dark dungeon with little food and water, and no creature comforts. One passage specifically states that “they were not allowed to visit a bath, to cut their hair, or to expose themselves to the sun’s rays” (οὐ συνεχωρεῖτο αὐτοῖς προσελθεῖν βαλανεῖω, οὐκ ἀποκείραι τῆς κόμης τὸ περιττόν, οὐχ ὑποκαθίσαι ἀκτῖνας ἡλιακάς).²⁵ Whether or not such bathing facilities existed in Tarsos in the mid-ninth century, the *Martyrion* text clearly assumes that it was still the normal custom for Byzantines to go to the baths on a regular basis, and, when deprived of the opportunity, they considered it a severe hardship. This reference, therefore, provides an eminently appropriate context for the Amorium bathhouse.

23 DOP 58 (2004): 362. For evidence of middle Byzantine bathhouses, see C. Bouras, “Aspects of the Byzantine City, Eighth–Fifteenth Centuries,” in *The Economic History of Byzantium*, ed. A. Laiou (Washington, D.C., 2002), 2:525–26 (with refs.); see also F. K. Yegül, “Cilicia at the Crossroads: Transformations of Baths and Bathing Culture in the Roman East,” *Olba* 8 (2003): esp. 58–59.

24 A. Kolia-Dermitzaki, “The Execution of the Forty-two Martyrs of Amorium: Proposing an Interpretation,” *Al-Masāq* 14.2 (2002): 141–62. The authors are grateful to Dr. Olga Karagiorgou for bringing this publication to their attention.

25 *Martyrion* text Z, 65, quoted in Kolia-Dermitzaki, “Execution,” 157 n. 24.

PERIOD 3

The previous report suggested that the destruction (or, at least, the abandonment) of the bathhouse might be associated with the capture of Amorium in 838, the very episode in which the forty-two martyrs were taken captive.²⁶ No conclusive proof ties this event specifically to the sack of the city by the forces of Caliph al-Mu'tassim, but it remains an attractive hypothesis. After the destruction of the bathhouse, the whole area in and around the complex appears to have been abandoned for a considerable period of time, perhaps as much as a century or more. Further numismatic evidence was gathered in 2002 to support the view that occupation within the ruins of Structure 1 resumed only in the second half of the tenth century, although by then the building had long ceased to function as a bathing establishment.

The Lower City Church, Excavations in the Narthex (by E. A. Ivison)

The 2002 season saw the conclusion of ten years of excavation in the Lower City church (fig. 9). The interior of the church has now been completely excavated down to the Byzantine pavements and, in some areas, below those levels. The magnitude of the excavation effort can best be appreciated when one considers that only the tops of some of the walls were visible when work began in 1990. Archaeological strata of up to 4 m in depth had to be excavated to reach Byzantine and late antique levels. The volume and complexity of these contexts made this work difficult and hazardous at times. In particular the removal of large pieces of fallen masonry and carved stones was a constant challenge. It is therefore a pleasure to thank all those workmen and site staff whose devotion, skill, and comradeship made the church excavation possible.²⁷

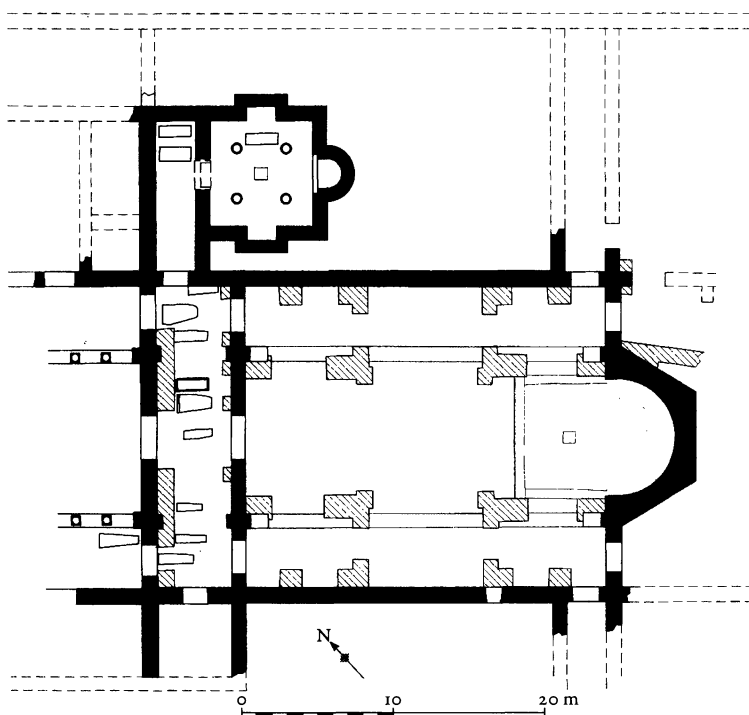
Excavation in 2002 focused on the remaining post-Byzantine contexts and on test sondages to explore foundations and burials. The northern half of the narthex was only partially cleared to pavement in 1998 because of the discovery of an undisturbed tomb.

The purpose of the work in 2002 was to remove any remaining post-Byzantine layers and to probe for further burials below pavement levels. Substantial post-Byzantine deposits remained at the southern end of the narthex, where a balk had been left to buttress Wall 3, which then supported a modern village house. This balk hid the south door leading from the narthex, along with the southwestern door that led to an atrium or exonarthex. Further test sondages were made in the central bay of the south aisle, last excavated in 1996. It was hoped that these probes would reveal late antique floor levels and foundations, and would settle the question of whether any chambers existed below the surviving stone slab pavement.

²⁶ DOP 58 (2004): 362–63.

²⁷ I thank all those who worked so hard at the church during the 2002 season, especially Dr. Olga Karagiorgou, Georgios Brokolakis, Nikos Tsivikis, Lisa Usman, Jane Foley, Julie Roberts, Serhat Karakaya, Oğuz Koçyigit, and Feriizat Ülker.

Fig. 9 The Lower City Church, sketch plan: phase 1 walls in black, phase 2 in hatching (drawing: B. Arubas)



The Narthex

ARCHITECTURAL FEATURES

Excavation of the balk at the south end revealed the late antique doorway leading through Wall 3 (fig. 10). Unlike the doorway at the north end, this doorway was centrally placed in the south wall, contrary to the location surmised on published plans. Furthermore the breccia lintel and doorframes were fully preserved in situ. Like most of the other doorframes in the church, these elements were carved in late antiquity and were either retained or reused in the middle Byzantine reconstruction. The fill in the doorway had held the broken lintel in place, and considerable care was needed to remove it safely. This is the only doorframe in the church that has been preserved intact into modern times. The north doorway from the narthex was also emptied of debris, revealing the breccia marble doorframes and threshold. This doorway leads into an unexcavated chamber, and perhaps a narrow corridor running parallel to the northern Wall 7. Two massive bracing foundations were uncovered, aligned with the nave stylobates. These walls no doubt aided the stability of the building and the outward thrust of the nave arcades. Areas of the late antique mortar beds that once supported marble pavements were preserved at the north and south ends of the narthex. In section these features resembled those found in the bema and the naos, consisting of a layer of crushed, mortared rubble laid over hard earth fill, topped by a thick layer of *opus signinum* and a bed of white mortar. Surviving portions of these beds were incorporated into the middle Byzantine floors. Patches of *opus signinum* for fixing marble revetment were also recorded at the bottom of the narthex walls.

The middle Byzantine reconstruction saw major alterations to the narthex. The addition of Walls 22 and 19 doubled the thickness of the western walls, while piers (designated as Walls 23, 24, 41–44, and 46) were added, together with two more piers (Walls 67–68) at the south end. These constructions served to buttress the western naos and probably supported a masonry vault. The floor level of the narthex now lay some 0.50 m lower than that of the naos, which

Fig. 10 Church, A1 Narthex, south door in Wall 3, looking south southwest (AM02/10/26; photo: E. A. Ivison)

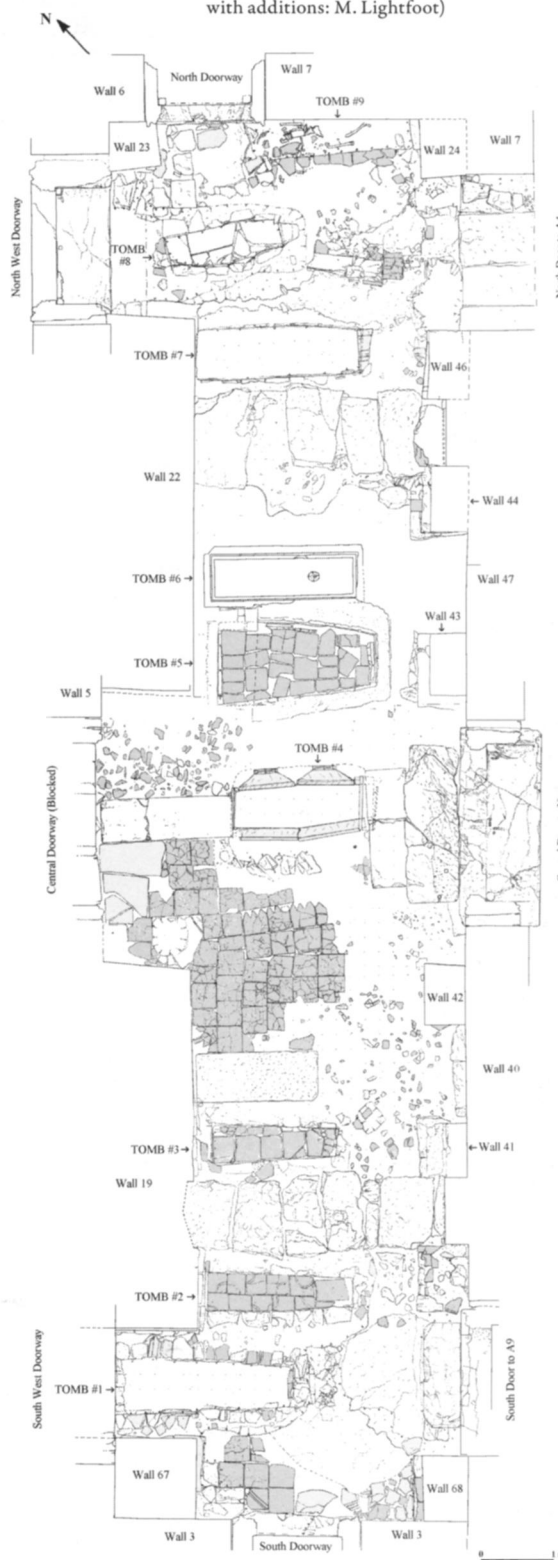


had been raised by the installation of the new *opus sectile* pavement. The threshold of the central door to the naos was raised at the same time, necessitating the addition of steps in the narthex. Two large spolia cornice blocks dating from the Roman period were therefore used as steps up to the naos (upper step, T1666). The lower step lay directly over the eastern end of tomb 4, indicating either that the step was moved to build the tomb or that the step was a later addition. A spolium step was also added before the door leading into the south aisle; the doorframe and threshold of its counterpart to the north have disappeared. All three monumental portals leading out of the narthex toward the west were fully revealed in 2002. These doors preserved portions of their late antique marble frames, which were retained in the middle Byzantine church. Settings on the narthex thresholds revealed the existence of double doors that turned inward and were secured with vertical bolts. The central portal was originally 2.24 m in width, but at some point it was narrowed to form a door only 0.72 m wide. This opening was aligned with the east–west axis through the church, but it remains unclear when and why this construction occurred. One may speculate that this narrowing may reflect a decline in importance of the central doorway and a change in the principal entrances to the church.

MIDDLE BYZANTINE LEVELS: THE TOMBS

Excavation in 1998 revealed a tomb, here designated tomb 5, and by the end of the 2002 season a further eight tombs had been excavated. Together with the 1998 tomb, these were numbered 1–9, running consecutively from south to north (figs. 11–13). The tombs were constructed within cuts dug into the late antique fills under the middle Byzantine narthex. This entailed the removal of sections of tiled pavement, as in the center of the narthex, and cutting through remnants of late antique mortar beds at the north and south ends. Some of the excavated fill was redeposited over the cover stones to level up the floor surface (Contexts 18, 69, 76, 80, 89). On average the lids of the tombs lay some 0.20–0.30 m below the narthex floors. Consequently the floor of the narthex became a patchwork of beaten earth surfaces covering tomb lids, fragments of tiled pavement, reused mortar beds, and spolia paving. In addition to tomb 5, unearthed in 1998, seven tombs were found sealed and intact. The preservation of these tombs provides important evidence for the study of Byzantine burial practices at Amorium. Only tomb 9 at the northern end of the narthex had been disturbed in the Seljuk period. The contexts and contents of these tombs indicate a date for their construction and use during the tenth and eleventh centuries. A detailed discussion of the human remains is provided in a separate section below.

Fig. 11 The Lower City Church, state plan of the narthex, showing tombs, pavements, and other features (drawing: E. A. Ivison, with additions: M. Lightfoot)



Tomb Catalogue (see fig. 11)

South Narthex, tomb 1. Dim(ensions): L(ength) 2.40 m; W(idth) 0.78 m (west), 0.56 m (east), D(epth below lid) 0.56 m (west), 0.48 m (east). Tomb structure (Context 82): Rectangular compartment, tapering from west to east. Walls built of 1–2 courses of large limestone blocks capped by narrower courses of stone and tile fragments. Floor of beaten earth, rising toward the western end. Lid (Context 81) composed of four large, roughly hewn slabs of limestone, interstices sealed with fragments of stone and tile.

Burials (Context 83): Minimum of four individuals. Uppermost supine with head to west. Scattered skeletal material from earlier burials found at east and west ends of tomb. A minimum of twenty fragments of iron nails and small iron strips, many of which preserve traces of oxidized wood, indicated the existence of a bier or coffin.

South Narthex, tomb 2. Dim.: L. 2.04 m; W. 0.54 m (west), 0.40 m (east); D. 0.40 m (west), 0.38 m (east). Tomb structure (Context 85): Rectangular compartment, tapering from west to east. Walls built of two courses of reused limestone blocks. Floor paved with square tiles laid on earth, inclined upward to form a pillow at the western, head end of the tomb. Lid (Context 84) composed of three large, rough-hewn limestone slabs, interstices sealed with fragments of stone and tile.

Burials (Context 86): Minimum of six individuals. Two articulated skeletons, supine with heads to west, arms crossed on pelvis. Scattered skeletal material of at least four more individuals at east and west ends of tomb.

Fig. 12 Church, A1 Narthex, general view showing tombs from above, looking north northeast (AM02/10/14; photo: E. A. Ivison)

Fig. 13 Church, A1 Narthex, general view showing tombs from above, looking south southwest (Neg. AM02/10/12; photo: E. A. Ivison)



South Narthex, tomb 3 (fig. 14). Dim.: L. 1.75 m; W. 0.58 m (west), 0.39 m (east); average D. 0.50 m. Tomb structure (Context 64): Rectangular compartment, tapering from west to east. Walls built of two courses of reused limestone blocks, with a fragment of closure slab lining the western end (T1664; see below, pp. 258 and 260). The courses were heavily rendered with lime mortar. Floor paved with square tiles and tile fragments on earth, inclined upward to form pillow at western end of tomb. Lid (Context 61) composed of three large, reused limestone slabs, with interstices sealed with fragments of stone and tile.

Burials (Context 65): Minimum of five individuals. Three articulated individuals, supine and extended with hands crossed on the pelvis. The upper individual (no. 1) was laid partially over individual (no. 2) beneath. A tile pillow supported the skull of no. 2. Additional bones and a skull were piled at the western end. The excellent condition of the bones can be attributed to washed-in earth that covered them completely.

Center Narthex, tomb 4 (fig. 15). Dim.: L. 2.00 m; W. 0.50 m; D. 0.58 m. Tomb structure (Context 71): Trapezoidal, coffin-shaped in plan, with walls constructed of spolia. The south wall made up of two Ionic impost capitals of



Fig. 14 Church, A1 Narthex, Context 65, human remains in situ in tomb 3, looking west northwest (AM02/05/22A; photo: C. S. Lightfoot)

breccia marble (T1633–34) and a templon post fragment (T1635; see below pp. 257 and 259), with smaller stone fragments in the interstices. The capitals stood on their sides, with their impostes facing inward. The north wall was built with a single course of limestone blocks, capped with a broken marble railing from the middle Byzantine ambo. The west and east walls were lined with reused marble slabs. The floor was of beaten earth.²⁸ Lid (Context 70) composed of three spolia closure slabs (T1630–32) and a post (T1636), laid face down, with interstices sealed with fragments of stone and tile. The slabs come from the middle Byzantine ambo (fig. 15, see below, pp. 257–59).

Burials (Context 72): Only two articulated individuals (nos. 1 and 2), with heads to the west; lying side by side, supine, extended, with arms crossed on pelvis. Individual no. 1 (on south side) was laid partially over the earlier individual no. 2 (on north side), so that the legs of no. 1 lay between those of no. 2.

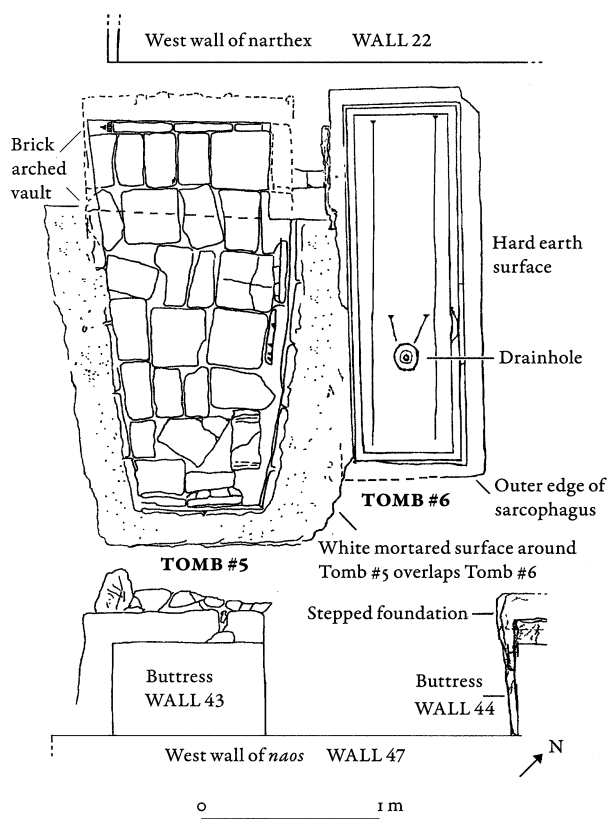
Burial Clothes: Textiles associated with burial 1 were found in a good state of preservation. Although disturbed by decomposition, a mass of decayed textiles covered the chest, pelvis, and upper legs of individual no. 1, suggesting the outline of a long robe. Fragments of woven gold thread were found on the chest, indicating the presence of an embroidered feature. The face of no. 1 was also originally covered with a square piece of cloth. Individual no. 1 also once wore leather shoes, fragments of which were preserved in situ. These shoes were similar to the better-preserved examples found in tomb 6. A perfectly preserved hen's egg was found placed in the northwestern corner, beside the head of individual no. 2. Two late Roman bronze coins (SF4493, SF4494) were found under the surface of the earth floor of the tomb during cleaning.²⁹

28 Following excavation the walls of tomb 4 were partially dismantled to extract important spolia, and new blocks were inserted to replace those removed.

29 SF4493: AE (clipped) of uncertain emperor ([-]VS P F AVG; bust r., draped, pearl diademed) and mint, reverse very corroded; 30–24 mm; 8.95 g; 12h; SF4494: AE3 of Honorius (395–408), uncertain mint, *Gloria Romanorum* reverse type; 16–13 mm; 1.24 g; 6h; compare DOC 703–5.



Fig. 15 Church, A1 Narthex, Context 71, tomb 4, with slabs lifted from lid, T1630–32, looking west northwest (AM02/Church/10; photo: C. S. Lightfoot)



North Narthex, tomb 5 was excavated in 1998 (figs. 16, 17). The tomb and its contents have received preliminary publication in previous reports.³⁰ Initially it was proposed that associated coins of Nikephoros II Phokas indicated that the construction of the tomb, and the installation of the bier with two articulated burials, most probably occurred sometime between 963 and circa 970. Subsequent study of the human remains, however, has shown that, in addition to these two burials, there were also the remains of a further two adult individuals and a young child.³¹ The evidence of these additional burials suggests that interment either continued for a time afterward, or had occurred during or shortly before this period, and had been cleared aside for individuals nos. 1 and 2.

North Narthex, tomb 6 (figs. 16–18). Dim.: lid (joined): max. L. 1.96 m; W. 0.86 m (west), 0.82 m (east); W. of edge, 0.07–0.10 m; Height, 0.25–0.28 m.

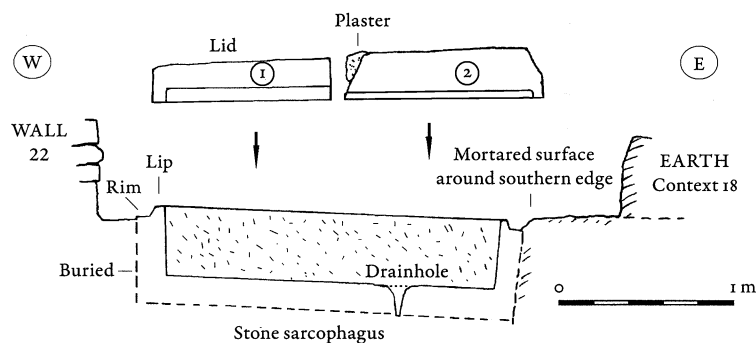


Fig. 16 The Lower City Church, part of narthex, showing tombs 5 and 6 (drawing: E. A. Ivison)

Fig. 17 Church, A1 Narthex, Context 49, lid of tomb 6 to north of tomb 5, excavated in 1998, looking west northwest (Neg. AM02/02/1; photo: C. S. Lightfoot)

30 DOP 55 (2001): 374–79.

31 J. A. Roberts, “Remains from the Lower City Church, Narthex Tomb, 1998,” in *Amorium Reports*, vol. 2, *Research Papers and Technical Studies*, ed. C. S. Lightfoot, BAR 1170 (Oxford, 2003), 169–71; DOP 58 (2004): 366–67.

Fig. 18 The Lower City Church, section of tomb 6, looking north (drawing: E. A. Ivison)

Sarcophagus trough: exterior L. 2.20 m, interior L. 1.90 m; W. 0.52 m; D. 0.40 m. Tomb structure (Context 50): Monolithic limestone sarcophagus, rectangular in plan, with a flat floor and vertical walls rising to a raised inner rim. Trough plainly dressed and apparently undecorated on the exterior, which was buried up to the rim. A sinkhole in the center of the floor was designed to drain off body fluids (outer diam. 0.14 m). The trough is tipped slightly toward the east. Lid (Context 49): Two separate but joining cover stones of limestone. Roughly dressed on the exterior, with slight beveling on lower lip. Underside hollowed out, with lip stepped to slot onto raised rim of trough beneath. The lid was partially exposed in 1998, but its identity was then undetermined. Apart from the occasional tile fragment, the edges and interstices of the lid were completely sealed by a thick coating of white plaster mixed with chopped hay or chaff.

Burials (Context 51): Four articulated individuals, nos. 1–4, laid in an overlapping fashion one on top of the other. Supine with heads to west, arms crossed on the lower chest or pelvis. The bones were badly decomposed and had split apart from liquid and mineral absorption. Fragments of desiccated flesh were detected on some bone fragments. Burial clothes: The uppermost individual no. 1 preserved fragments of textiles from garments and a shroud.³² Textile disks were also observed placed at intervals down the front of individual no. 1. The shroud had been tightly wrapped around the body to produce a mummiform-shaped corpse. The body was then secured with a single length of plaited cord, stretched around the back and over the stomach, then passed behind the thighs and tied in a knot above the knees. Tying the limbs of the dead in place presumably kept the body in the desired state of repose in the grave. A rectangular bundle of grasses, utilized as a pillow, was found beneath the skull of individual no. 1. Remarkably, this pillow still preserved an indentation showing where the head once rested. Further textile fragments found between individuals nos. 1 and 2 have been tentatively identified as fragments of silk, but it remains uncertain to which body these pertained. Leather shoes were found in situ on both feet of individual no. 1; one example was preserved on a foot of individual no. 2.³³

North Narthex, tomb 7. Dim.: L. 2.30 m; W. 0.60 m (west), 0.61 m (east); D. 0.52 m (west), 0.63 m (middle), 0.58 m (east). Tomb structure (Context 78): Roughly rectangular compartment cut through late antique mortar beds into the fill beneath. Walls constructed of spolia stones, roughly mortared over on interior, and capped by tiles and marble slab fragments. Floor of beaten earth, slightly raised at the western end to form a pillow. Lid (Context 77): Composed of at least seven stones, all spolia. Western end covered by large threshold (T1673) and block fragments. Center covered by three smaller slabs, simply braced together; these stones probably served as the removable entrance for later burials. East end covered with ad hoc mix of limestone and marble slab fragments.

Burials (Context 79): Minimum of two individuals. All bones were severely decomposed and mineralized, with a tendency to crumble. One articulated individual no. 1, with head to the west, supine, extended, with arms crossed on pelvis. Disarticulated bones of earlier individual no. 2 were piled at western end of tomb, serving as pillow for skull of no. 1. Feet bones from individual no. 1 were found in situ in the southeastern corner. Individual no. 2 wore leather shoes; the left shoe was still preserved and was lifted. Fragments of iron nails, probably from a wooden bier similar to that found in tomb 5, were recovered from the eastern end of the tomb.

32 Initial observations and recording of the shroud in situ suggested that it took the form of bandages that had been wound around the body in the manner of swaddling bands; L. Usman, "Excavation, Conservation and Analysis of Organic Material from a Lower City Church Narthex Tomb," in Lightfoot, *Amorium Reports*, 2:194–95. However, detailed examination of the textile fragments by Petra Linscheid in 2003 has demonstrated that they comprised a single piece of cloth that had broken apart into small strips; P. Linscheid, "Middle Byzantine Textiles from Amorium, Anatolia," *Archaeological Textiles Newsletter* 38 (Spring 2004): 25–27.

33 For further details, see Usman, "Excavation, Conservation and Analysis," 193–201.

North Narthex, tomb 8. Dim.: L. 2.00 m; W. 0.50 m at center, tapering to 0.38 m at east end; D. 0.72 m (west), 0.54 m (east). Tomb structure (Context 91): Trapezoidal, coffin-shaped compartment. Walls of two courses of reused blocks, laid in mud and occasional mortar, topped with three courses of tiles and one of stones. Paved with irregular limestone slabs laid on tiles and earth. Tile fragments leaned against the western wall of the tomb served as a pillow. Lid (Context 90) consists of three large, roughly hewn slabs of limestone and a reused fragment of marble closure slab (5th–6th c.), with interstices sealed with mortar and fragments of stone and tile.

Burials (Context 92): Minimum of six individuals, only uppermost no. 1 articulated and supine, with head to west. Intermingled skeletal material lay below, representing earlier burials of five individuals. Fragments of textile were found in the center of the tomb, and fragments of leather shoes were found at the eastern end.

North Narthex, tomb 9. Dim.: L. 2.34 m; W. 0.60 m (west), 0.40 m (east); D. 0.25–0.35 m. Tomb structure (Context 041): Rectangular compartment, tapering in plan from west to east; built in corner of Walls 7 and 24 and cut through late antique mortar beds. South and west walls built of 3–4 courses of tiles laid in mud. Earth floor paved partially with tile fragments and stones. Lid is missing.

Burials and fill (Context 40): Burials disturbed and looted; principal burial originally supine with head to west. Only left pelvis and right femur found in situ, with disarticulated bones at west and east ends. A nearby Seljuk refuse pit (Context 36, fill; Context 37, cut) contained disarticulated human bones and a large fragment of a decorated glass bracelet, perhaps looted from tomb 9. Thirty-two iron nails, some with traces of oxidized wood from either a bier or coffin, were found in situ along sides of tomb and disturbed in fill. Glass vessel fragments were also recovered from the fill.

Discussion

All the tombs were inserted within the framework of walls and piers built during the middle Byzantine reconstruction of the church (fig. 9). The sarcophagus, tomb 6, may well represent the earliest burial in the narthex. The trough of tomb 6 could have been a Roman spolium, whereas the massive lid was made probably in the middle Byzantine period. Apart from being the only tomb of its type found in the church, tomb 6 can be conclusively dated earlier than adjacent tomb 5. The wall tops of tomb 5 were capped with mortar, which also extended over the surrounding earth surfaces (fig. 16). This unbroken mortar surface also partially covered the wall tops of the sarcophagus, thus indicating that tomb 6 was installed prior to the construction of tomb 5. The white plaster used to seal the lid of tomb 6 was also smoothed over the vault of tomb 5, indicating that tomb 6 was last used sometime after the adjacent tomb was built. The coins of Nikephoros II Phokas discussed above indicate that tomb 5 was used sometime after 963, and it may have been built either at this time or very shortly before. If so, then a nominal *terminus ante quem* of approximately 963 can be provided for the existence of tomb 6, with the possibility that the sarcophagus could have been installed even as early as the proposed date for the church reconstruction, in the late ninth or early tenth century.

Tomb 8 was significantly narrower than the other tombs, with corbeled upper walls, apparently to squeeze it into the space available between tomb 7 and the northwestern door. If so, then tomb 8 may be among the latest in the

north narthex, built after tomb 7, and presumably after tombs 6 and 5 as well. Tombs 1, 2, and 3 at the south end of the narthex resemble tomb 7 in general design and construction, but this evidence can safely suggest only that they may be roughly contemporary. With its floor at a depth of only 0.35 m from floor level, tomb 9 was the shallowest tomb in the narthex. This may explain why this tomb alone suffered desecration and may suggest that it is a comparatively late addition.

The incorporation of elements from the ambo of the ninth–tenth century into tomb 4 was perplexing at first. Clearly the ambo was dismantled while the church was still functioning. One may assume that the ambo passed out of use or was reconstructed at the time tomb 4 was built, which thus explains the careful incorporation of its stones into that tomb’s fabric. Independent study of the church’s frescoes and stone furnishings indicates that these features received some refurbishment, probably during the eleventh century.³⁴ If so, then tomb 4 may have been built at this time; its location and contents point to a burial of individuals of some importance. Unlike the other tombs, only two burials were placed in tomb 4. Likewise, tomb 4 occupied the most prominent position, lying on the east–west axis running through the central doors, and thus linking it with the royal door of the templon and the divine liturgy at the altar table. The use of another middle Byzantine spolium in the wall of tomb 3 also suggests that this tomb should be dated later in the series.

Recent study has proposed that Byzantine control of Amorium ended by the late eleventh century, and that the city may have been “partially or completely abandoned” thereafter.³⁵ Burials in the narthex probably ceased at the same time. Although a coin of the Seljuk sultan Kılıç Arslan II (SF4436; see below, p. 263 and n. 69) was recovered from the earth that had washed into tomb 3, this find was not associated with the burials lying on the floor of the tomb. Elsewhere in the church, evidence shows that the building was adapted to non-Christian use sometime in the first half of the thirteenth century.³⁶

A variety of tomb types were represented in the narthex. Tomb 6 was a sarcophagus, and tomb 5 was built of brick and partially vaulted (figs. 16, 17). The remaining tombs (1–4, 7, and 8) were built of coursed spolia masonry, bonded with combinations of earth and lime mortar. These tombs were slightly anthropomorphic in plan, being wider at the western end to accommodate the head and shoulders, and tapering toward the east. Like tombs 5 and 6, these tombs were not backfilled, but were closed with stone cover slabs or blocks. It is of interest that the spolia slabs used to close tomb 4 were laid facedown, so that the carved faces would face the deceased. Flat tile, marble, and limestone fragments were used to even up the wall tops and probably cushioned the enormous weight of the cover stones. Apart from varying amounts of earth fill that had washed in between the cover slabs, most human remains were found exposed on the floors of the tombs. The difficulty of raising these massive lids during excavation suggests that only smaller stones or wooden planks (as in the case of tomb 5) were removed when adding new burials. Although no markers or epitaphs were encountered in excavation, the locations of the tombs were clearly known in Byzantine times, to judge from the multiple burials found within them. One may conjecture that wall paintings and inscriptions now lost commemorated the deceased.

Iron nails and other fittings, some retaining traces of oxidized wood, were found in tombs 1, 7, and 9. These remains and their distribution in the tombs suggest the presence of wooden biers, perhaps similar to that recorded in tomb 5 in 1998.³⁷ No evidence of funerary furniture was discovered in tombs

34 E. A. Ivison, “Polychromy in the Lower City Church: An Overview,” in Lightfoot, *Amorium Reports*, 2:120–21.

35 Gill, *Amorium Reports*, 1:8 (n. 1 above).

36 Ibid., 1:14–15.

37 *DOP* 55 (2001): 376–77, fig. F.

4 and 6 (the sarcophagus), where the bodies appear to have been laid directly in the tomb.

Few funerary textiles from the tenth and eleventh centuries have been published, and so the fragments from tombs 4, 6, and 8 provide important new evidence for burial clothes. Those textiles on the uppermost bodies were best preserved, perhaps as a consequence of more favorable rates of desiccation and decomposition compared with those at the bottoms of the tombs.³⁸ The gold-embroidered robe and leather shoes worn by individual no. 1 (identified below as male) in tomb 4 give some indication of the wealthier burial clothes used at medieval Amorium. The discovery of expensive silks in tomb 6 further attests to the high status of the dead buried in the narthex. Middle Byzantine sources indicate that deceased clerics, monks, nuns, and laity were buried in robes appropriate to their rank, while the poet Christopher of Mytilene (ca. 1000–post 1050/68) refers to the shrouds (σουδάρια), clothes (στολαί), and footwear (σάνδαλα or sandals) buried with laity at Constantinople.³⁹ The placing of a cloth over the face of the dead as an act of modesty, as found in tomb 4, is also paralleled in the textual tradition.⁴⁰ The shroud and plaited cord around individual no. 1 (male) in tomb 6 are of special interest (fig. 19). The *Translation and Miracles of Saint Theodora of Thessalonike* (composed 894) records that when the saint's body was translated, it was wrapped in a woollen shroud or winding sheet (σινδών), and that “the narrow girdle (σικμικίνθιον—in the light of the Amorium finds, perhaps now to be understood as a plaited cord) that bound her hands to her chest, as is customary for corpses, was preserved intact and undamaged, with not a trace (as they say) of damage, so that its knot could be easily loosed.”⁴¹

41 E. Kurtz, “Des klerikers Gregorios Bericht über Leben, Wunderthaten und Translation der Hl. Theodora von Thessalonich nebst der Metaphrase des Joannes Stavrakios,” *MASP*, 8th Ser.,

6.1 (1902): 41; trans. in A.-M. Talbot, ed., *Holy Women of Byzantium: Ten Saints' Lives in English Translation*, Byzantine Saints' Lives in Translation 1 (Washington, D.C., 1996), 224.

38 These remains were recorded, conserved, and lifted by Lisa Usman, Jane Foley, and Serhat Karakaya. Lisa Usman also retrieved samples of the textiles and other organic remains for technical study at the University of London's Institute of Archaeology (n. 32 above).

39 J. Goar, *Euchologion sive rituale Graecorum* (Venice, 1730, repr. Graz, 1960), 451; E. Velkovska, “Funeral Rites according to the Byzantine Liturgical Sources,” *DOP* 55 (2001), 32, 35–39; E. Kurtz, ed., *Die Gedichte des Christophoros Mytilenaios* (Leipzig, 1903), 52–53, #82, line 7. See also the comments of J. Kyriakakis, “Byzantine Burial Customs: The Care of the Deceased from Death to the Prothesis,” *GOTR* 19.1 (1974): 49–54.

40 Kyriakakis, “Byzantine Burial Customs,” 52.

Fig. 19 Church, A1 Narthex, tomb 6, in situ detail of shroud around individual no. 1 (AM02/11/100; photo: C. S. Lightfoot)



The remains of leather shoes found in tombs 4, 6, 7, and 8 were also significant finds. Those best preserved came from the latest burials in tomb 6 (fig. 20). These shoes also await further study, but they appear to share common features. The shoes were stitched together from several pieces of leather and had flat soles. At least some were apparently of the slip-on variety, without laces and rising to the ankle, where they could be folded down. Similar shoes are represented in wall paintings of the tenth–eleventh centuries in Cappadocia, where they are worn by secular and ecclesiastical élites.⁴² Apart from the iron bracelet found in tomb 5 in 1998, no metal jewelry or overtly religious artifacts were found with the dead, but the hen's egg in tomb 4 is paralleled in other burials of the period as a symbol of Christian resurrection.⁴³

The number of burials indicate an extended period of time for the use of some of the tombs. The orientation and disposition of the bodies, often laid on top of one another, or displacing earlier remains, is typical of the middle Byzantine period. Despite the poor preservation of many bones, the discovery of isolated limbs and extremities suggests that bones were occasionally removed before new bodies were added. Presumably these bones were reburied at a yet undiscovered location. But the haphazard removal of these remains and the stacking of bodies hardly suggest a systematic policy of secondary burial, as practiced in modern Greece.⁴⁴ The location and sizes of the tombs, and the relatively limited numbers of burials within them, suggest that these are private, family tombs rather than common graves allocated for general categories of the population. This inference is supported by the presence of both males and females in the same tomb, and the relatively consistent age range (see below, pp. 254–56). This evidence suggests that it is unlikely that the dead were clergy, monks, or nuns, since such burials were customarily gender specific and separate from those of laity. The almost complete absence of children or adolescents is also suggestive of restrictions on burial in the church.⁴⁵ One may therefore conclude that the narthex was transformed into a privileged burial site for wealthy families who, like their counterparts elsewhere, may have endowed the church in their lifetimes.

42 H. Yenipinar and S. Şahin, *Paintings of the Dark Church* (Istanbul, 1998), 62 (donor figures).

43 E. A. Ivison, "Mortuary Practices in Byzantium: An Archaeological Contribution (ca. 950–1453)" (PhD diss., University of Birmingham, 1993), 197; J. Wilkes and G. Waywell, "Was Sparta the World's First Heritage Centre?" *Current Archaeology* 130 (August, 1992): 436 (hen's egg); I. Vasiliu, "Cimitirul Feudal-Timpuriu de la Isaccea," *Peuce* 9 (1984): 107–41, pl. 8, lower page (five glazed terracotta eggs).

44 L. M. Danforth and A. Tsiras, *The Death Rituals of Rural Greece* (Princeton, N.J., 1982).

45 The remains of a small child were identified among the contents of tomb 5; *DOP* 58 (2004): 367.

Fig. 20 Church, A1 Narthex, tomb 6, in situ detail of leather shoes (AM02/11/114; photo: C.S. Lightfoot)



Central Bay of the South Aisle

Excavation in 1996 revealed a pavement of massive stone blocks, some of which had been disturbed and removed during the Seljuk period.⁴⁶ Work in 2002 excavated these Turkish contexts to find out more about the Byzantine pavements. A large Seljuk pit had been dug between the paving blocks, reusing some pieces as edging. Excavation showed that this pit was approximately bottle shaped and filled with dumped ash. The bottom of the pit was not reached because of its considerable depth and the danger of undermining the surrounding pavement. Excavation proved conclusively that no crypt or vaulted substructure of any kind existed below the stone pavement. Instead the mortar beds and foundations for the late antique basilica were revealed. These features closely resembled those excavated in the north aisle, with graded layers of earth, crushed stones, and *opus signinum* bedding. The earlier stone pavement had apparently been stripped out and replaced with the paving of spolia blocks during the middle Byzantine reconstruction. Why the builders chose to use such massive blocks, in contrast to the tiled floor of the north aisle, remains a mystery.

46 DOP 52 (1998): 326, fig. 6.

Recording, Conservation, and Restoration

Further recording work took place throughout the building, with particular emphasis upon the ambo foundation. A long-term program of conservation and restoration was also initiated this year, under the supervision of Jane Foley. Work was carried out upon the synthronon, where frost damage was repaired and fallen blocks were replaced. Sections of the main southern and northern walls of the side aisles were consolidated, and weakened sections were dismantled and then rebuilt. Further cleaning and conservation was carried out on the fresco still in situ on Wall 3, and further efforts were made to protect the painting from the elements. At the end of the season, the opened tombs were covered with wooden planks, geotextile, and pumice to preserve them. The doorways leading out of the narthex were blocked with dry stone walls to prevent loose fill from collapsing into the excavation. The glazing and window frames of the middle Byzantine church were the subject of a special study this year by Dr. Francesca Dell'Acqua. A complete inventory of all surviving fragments of molded plaster *transennae* was made, and sills and window arch fragments at the church were recorded. The glazing of the middle Byzantine church has recently been discussed in the context of glass finds discovered between 1988 and 1997.⁴⁷

47 Gill, *Amorium Reports*, 1:14, 263 (n. 1 above). Dr. Dell'Acqua's comprehensive study of all these materials will appear in a future Amorium publication.

The Lower City Church after Ten Seasons of Fieldwork

The architectural significance of the church was recognized at an early stage in its excavation, but its importance for the history of Amorium as a whole became evident only later. Final publication of the church's architecture, decoration, archaeology, and history is planned in the Amorium monograph series. Interpretations of the church's history in preliminary reports have changed as more of its structure came to light. It is now known that two major building phases are visible in the extant structure, and its importance as an example of medieval reconstruction has now been widely recognized. The first phase was the construction of an aisled basilica. The plan, pottery from the foundations, and fragments of original capitals and furnishings indicate a construction date in the late fifth to early sixth century. After a devastating fire, the second phase was the reconstruction of the structure as a vaulted domed basilica, richly decorated with new marble pavements, architectural and liturgical sculptures, wall paintings, and vault mosaics. The most recent studies of the building point

to a date in the late ninth to early tenth century for this second phase. Epigraphic evidence also indicates that an unknown bishop, presumably of Amorium, sponsored the reconstruction. In addition the wall paintings and furnishings show that the church received at least one refurbishment prior to the Seljuk invasions, that is, after 1068. Study of the church's decoration is in progress and will make a major contribution to our understanding of Byzantine regional art.⁴⁸ Analysis of the post-Byzantine layers has also revealed an interesting history of Seljuk occupation.⁴⁹

Excavation has been confined to the church building proper, but test trenches and surface remains show that in both phases the church stood at the center of a complex of corridors and chambers extending along its north and south flanks. These remains must await excavation in future seasons, and proposals as to the status and dedication of the church complex must remain speculative for now. Because of its size and splendor, the Lower City Church was one of the major ecclesiastical foundations of Amorium, perhaps in its first phase even serving as a cathedral or a monastic church. Clearly it remained an important religious center in the tenth and eleventh centuries, even though it stood outside the walls of the "new city" of Amorium, built over the old citadel of the Upper City. Excavations in 2002 demonstrated the church's importance as a burial place for members of Amorium's elite during this period. In this context, the Lower City Church may have served in its second incarnation as a suburban monastic or pilgrimage complex.

Osteological Analysis of the Human Remains from the Narthex of the Church (J. A. Roberts)

The following report briefly summarizes the analysis of the skeletal remains recovered from the tombs in the narthex of the Lower City Church during the 2002 season. A full report, containing details of methodology, the state of preservation of the remains, a more in-depth discussion of the demographic composition of the burials, and the size, stature, and musculature of the individuals will be included in the final publication. The pathological conditions and skeletal variants identified will also be discussed in the final report, together with results of an analysis of the burials from tomb 5, examined in 2001 (see above, n. 31).

The remains from seven tombs (1–4 and 6–8) were analyzed; the final one, tomb 9, had been disturbed and contained only scattered human remains when excavated. The tombs themselves varied in construction and type (see above), and this influenced the state of preservation of the burials within them. For the purposes of this report, a summary of the burials within each tomb is provided, together with some preliminary conclusions.

Tomb 1 (Context 83)

A minimum number of four individuals were identified. This number was based on the presence of four right and left pelvic bones, four right and left femora, and four right and left tibiae. An intact cranium and two intact mandibles were present. The sex and age of the individuals were determined as follows: Individual One: male, aged 40 to 50; height 156 cm \pm 2.99 cm (5'1"). Individual Two: female, aged 40 to 50. Individual Three: probable male, aged 30 to 40. Individual Four: female, aged 40 to 60.

Tomb 2 (Context 86)

Although there were only two articulated skeletons within the tomb,

48 E. A. Ivison, "Polychromy: An Overview," 119–28; idem, "Middle Byzantine Sculptors at Work: Evidence from the Lower City Church at Amorium," in *La sculpture byzantine (VIIe–XIIe siècles): Actes du colloque international organisé par l'École française d'Athènes et l'Ephorie byzantine des Cyclades-Golfe Saronique (6–10 septembre 2000)*, Supplément au *BCH*, ed. C. and V. Pennas, and C. Vanderhyde (Paris, forthcoming); E. Hendrix, "Painted Polychromy on Carved Stones from the Lower City Church," in Lightfoot, *Amorium Reports*, 2:129–37; and J. Witte-Orr, "Fresco and Mosaic Fragments from the Lower City Church," in Lightfoot, *Amorium Reports*, 2:139–56 (n. 31 above).

49 For the most recent summary, see Gill, *Amorium Reports*, 1:14–15.

additional skeletal elements increased the minimum number of individuals to six in total. Skeletal elements that were repeated five times included the right and left tibia, talus, and calcaneus. Pelvic bones from an individual aged considerably younger than the other occupants of the grave represented the sixth burial. Individual One: male, aged 35 to 45; height 170 \pm 3.27 cm (5'6"). Individual Two: male, aged 40 to 60; height 181 \pm 3.37 cm (5'9"). Individual Three: adult male; height 167 \pm 3.27 cm (5'5"). Individual Four: possible male, adult. Individual Five: probable male, aged 35 to 45. Individual Six: unknown sex, aged 17 to 23.

Tomb 3 (Context 65)

The excavator identified three clearly distinguishable articulated burials. An additional two left and two right fibulae and several tarsal bones, identified during analysis, increased the total minimum number of individuals in the tomb to five. As above, it is likely that these "extra" lower legs and feet represent previous occupants of the tomb, who had been cleared to one side to make way for the later burials. Individual One: male, aged 50+; height 175 \pm 2.99 cm (5'7"). Individual Two: male, aged 22 to 26; height 170 \pm 3.37 cm (5'6"). Individual Three: male, aged 25 to 35; height 167 \pm 3.37 cm (5'5"). Individual Four: adult male. Individual Five: probable male, adult.

Tomb 4 (Context 72)

This tomb, located immediately in front of the steps to the main doorway into the nave of the church, contained only two, clearly distinguishable articulated burials. Individual One: male, aged 34 to 44; height 163 \pm 4.05 cm (5'4"). Individual Two: female, aged 35 to 45.

Tomb 6: The Sarcophagus (Context 51)

A minimum number of four individuals were identified in the tomb, and each was excavated separately. Repeated elements included four right radii and ulnae, and right and left pelvic bones from three different individuals. Individual One: male, aged 30 to 40. Individual Two: probable male, aged 30 to 45. Individual Three: unknown sex, adult. Individual Four: female, aged 18 to 25.

Tomb 7 (Context 79)

Two easily distinguishable individuals of different ages and sex were identified. Individual One: male, aged 17 to 23 years. Individual Two: female, aged 50+ years; height 154 \pm 4.45 cm (5')

Tomb 8 (Context 92)

A minimum number of six individuals were identified. Only one of these, the latest burial (Individual One), was articulated in the grave. The rest of the remains were commingled, and repeated elements that included right and left pelvic bones, femora, tibiae, and tarsal bones from five individuals. Because of the extent of the mixing of the remains, it was not possible to undertake a comprehensive assessment of any pathological conditions present, that is, elements displaying evidence of pathology could not always be assigned to specific individuals. Individual One: male, aged 30 to 39; height 173 \pm 3.27 cm (5'7"). Individual Two: male, aged 40 to 50; height 164 \pm 3.27 cm (5'4"). Individual Three: male, aged 40 to 50; height 164 \pm 3.27 cm (5'4"). Individual Four: male, aged 25 to 30; height 174 \pm 3.27 cm (5'8"). Individual Five: female, aged 45+. Individual Six: unknown sex, aged 35 to 45.

Conclusions

A total minimum number of twenty-nine individuals were identified from the seven tombs, exclusive of human remains from tombs 5 and 9. Some of these were fully articulated skeletons, whereas others were represented only by disarticulated bones, probably the remains of the earlier occupants of the tombs who had been swept to one side to make way for new burials. The number of burials within each tomb varied from two to six and is likely to have been related to the status of the deceased. Likewise the position of the tomb within the narthex probably reflects their status, and it is probably no coincidence that the tomb with the fewest burials (tomb 4) has the most prominent, central location. The majority of individuals were male or probably male, with females making up only 24 percent of the burial population of known sex. Even if unsexed individuals were all female, there is still a strong male bias. Of the individuals who could be aged, only four (five if the male aged 25–35 is counted) were less than thirty years old at death. Despite the small sample size of the group, this is not typical of a premodern population, and it almost certainly reflects the high status of the individuals buried within the church and their good standard of living. There were no juveniles buried within the tombs, and only one young child was found in tomb 5.⁵⁰

Pathological conditions identified included dental disease, iron deficiency anemia, infections of the bone, degenerative joint disease, and examples of traumatic injury, including fractures and soft tissue injury, principally broken ribs and shin-bone injuries, although one individual (Individual One, tomb 3) had sustained a severe fracture of the nose. The disarticulated nature of many of the remains precludes the accurate calculation of disease prevalence rates within the burial population, but it will be possible to make general inferences regarding the health and nutritional status of individuals. This information can be used, in conjunction with that relating to mode of interment and the number of individuals per tomb, as part of an overall consideration of the status of the deceased.

Carved Stone: Important Recent Additions (E. A. Ivison)

Work continued on the carved stone inventory. Both new finds and stones gathered in past seasons were added to the catalogue, so that by the end of the 2002 season the stone inventory stood at 1,674 items, with more than one hundred pieces recorded this year alone. The construction of a new depot also enabled the complete reorganization of stone storage by trench and inventory number.⁵¹ Excavations at the Lower City Church uncovered important sculpted stones during the 2002 season. In the narthex, six Roman cornice blocks (T1657–61, T1663), dating from the Julio-Claudian period in the early first century, were found built into the footings of the middle Byzantine wall along the west side of the narthex (Walls 19 and 22). Identical profiles and similar dimensions indicate that these blocks came from the same structure, most likely of the Corinthian order. T1661 featured part of a two-line inscription (fig. 21; transcription by C. S. Lightfoot). Block length: 0.745 m; height: 0.37 m; height of letters: top line, Σ 0.047 m, Ο 0.043 m; bottom line, Ψ 0.040 m, Θ 0.035 m.⁵²

...]ΙΟΥΚΑΙΣΑΡΟΣΣΕΒΑΣΤΟΥ[... ...Τιβερ]ίου or Κλαυδ]ίου Καίσαρος
Σεβάστου [...
...]ΟΝΙΟΡΕΨΑΝΤΙΚΑΙ[... Ἀρτεμ]όνι θρέψαντι και[...

50 See above, n. 31.

51 The project is indebted to all those who contributed to this arduous work, particularly Dr. Adil Özme and Dr. Olga Karagiorgou. The latter also continued her ongoing study of the marble revetments, focusing on those from the bath complex.

52 Lightfoot and Arbel, "Amorium Kazısı, 2002," 3–4, pl. 9 (n. 1 above). This inscription is being studied in detail by Prof. Dr. Thomas Drew-Bear and will be included in his publication of the corpus of Amorium inscriptions.



Fig. 21 Church, A1 Narthex, T1661, inscribed marble cornice block built into Wall 22, inverted (AMoz/04/54; photo: C. S. Lightfoot)

A seventh cornice block fragment from the same monument, and also bearing a two-line inscription, was recognized in the spring of 2003 (T851, once used as filling in a middle Byzantine wall, and found loose in the narthex, Context AM96/A1-69; preserved width 0.195 m, height 0.105 m). The fragmentary inscription can be transcribed as:

...EYKIO[...]

...ITPO[...]

The inscription suggests that these blocks derived from a small shrine (*naiskos*) or monument dedicated to the emperor. The original location of this monument at Amorium remains unknown.

An important cache of carved stones was also recovered from the structure (Context 71) and lid (Context 70) of tomb 4. Two Ionic impost capitals (T1633, T1634) from the southern wall of the tomb resemble the sixth-century type found at sites in Asia Minor and elsewhere.⁵³ A number of capitals of this type have already been recovered at Amorium; some examples from the Lower City Church show signs of recarving in the middle Byzantine period.⁵⁴ Two post fragments of gray breccia marble were recovered from the lid and walls of the tomb (T1635, T1636). Both were the upper parts of the post and preserved iron dowels and holes for attachment of closure slabs, knobs, or colonnettes. The carving and decoration of these pieces conform to that found on posts attributed to the middle Byzantine templon.⁵⁵ Three of the cover stones of tomb 4 were *spolia* closure slabs of massive size, carved from gray breccia marble with red veins (T1630–32; fig. 15). Although no one slab is an exact copy of another, they clearly form a set, sharing the same distinctive shallow, raised carving and decorative repertoire. All have a similar layout, with a rectangular frame containing a diamond panel with a central medallion. On T1630 and T1631 the central medallions were also framed with so-called ivy leaf buds. These features were outlined in strapwork and/or plain bands, with a variety of whorls, rosettes, and stars set in the corner fields. These pieces preserved faint traces of red and blue paint on their carved surfaces. T1632 was a half of a composite slab, the cut edge of which joined precisely with fragments T470 and T133, found in the naos in the early 1990s (fig. 22). T1632 also preserved an iron cramp bedded in lead that once held these halves together. T205 was found to be a nonjoining fragment of the same slab. The marble, carving, and decoration of these slabs were identical to fragments of the middle Byzantine ambo previously published. Fragments of the staircase parapets and lower structure of the ambo have already been recognized.⁵⁶ The new slabs served probably as three of the four parapet

53 See, for example, Parman, *Ortaçağda Bizans Döneminde Frigya*, 181, no. A55, 196, nos. U51a–b and U52 (n. 5 above); V. Vemi, *Les chapiteaux ioniques à imposte de Grèce à l'époque paléochrétienne*, Supplément au BCH 17 (Athens, 1989), passim.

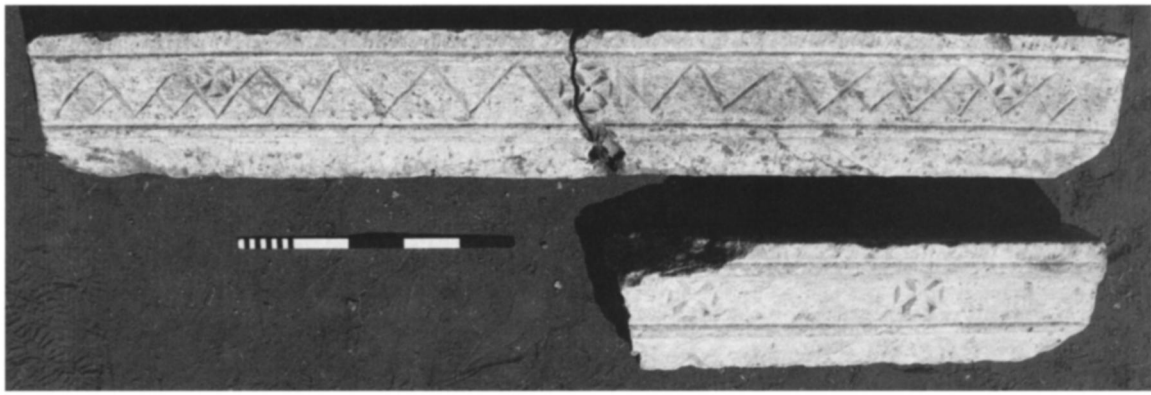
54 *AnatSt* 44 (1994): 120 and n. 14.

55 Ivison, "Sculptors at Work" (n. 48 above).

56 *AnatSt* 44 (1994): 121, pl. 21, (a); *AnatSt* 46 (1996): 102–3, pl. 13, (a); *DOP* 51 (1997): 293, 295–96, figs. 1–2, 6; Ivison, "Sculptors at Work."

Fig. 22 T1632, closure slab from tomb 4, with conjoining fragments T470 and T133 (AMoz/11/02; photo: E. A. Ivison)





slabs that enclosed the upper part of the pulpit. Two conjoining blocks (T1637a, b) from tomb 4 proved to be a rail that probably capped these parapet slabs (fig. 23). A further two lengths of this stone rail had also been recovered from the church in the 1990s (T533 and T1637). The foundation of the middle Byzantine ambo is still preserved in situ in the naos, and at least twenty fragments of its superstructure have now been identified. Future study of the Amorium example will make a significant contribution to our knowledge of the design and appearance of the Byzantine ambo in the ninth and tenth centuries.

T1664 is a white marble closure slab fragment used as the western wall of tomb 3 (fig. 14). Only a corner of the panel is preserved and only one side was visible, but it was clearly of good-quality material and workmanship. The visible side was carved with a shallow, recessed panel, containing part of a trapezoid in twisted strapwork. A stylized palmette filled the corner field. This piece resembles other middle Byzantine slab fragments found in the church (T140, T243, T492, and T493) and should be attributed to the tenth or eleventh century.

Of special note are two stray pieces, formerly built into modern village walls, that were recorded and added to the stone depot in 2002.⁵⁷ T1646 and T1647 were fragments of two separate templon epistyles, carved from fine white marble (figs. 24, 25). Both pieces show fine carving typical of the tenth–eleventh centuries, with strapwork and medallions; neither epistyle bore an inscription.⁵⁸ They cannot be fitted into the arrangement of furnishing known from the Lower City Church, and so they may be taken as evidence for the existence of more middle Byzantine churches at Amorium.

Another stray piece that deserves attention entered the excavation depot in 1996. T952 was found in a modern house wall in Emirdağ, but it came probably

Fig. 23 T1637a, b from tomb 4, with T533, ambo rails, obverse (AMo2/14/23; photo: E. A. Ivison)

57 These blocks were presented to the project by Mustan Ateş, one of the regular workers on the team.

58 See generally C. Barsanti, “Scultura anatolica di epoca mediobizantina,” in *Milioni: Studi e ricerche d'arte bizantina; Atti della Giornata di Studio, Roma, 4 dicembre 1986*, ed. C. Barsanti et al. (Rome, 1988): 275–95.

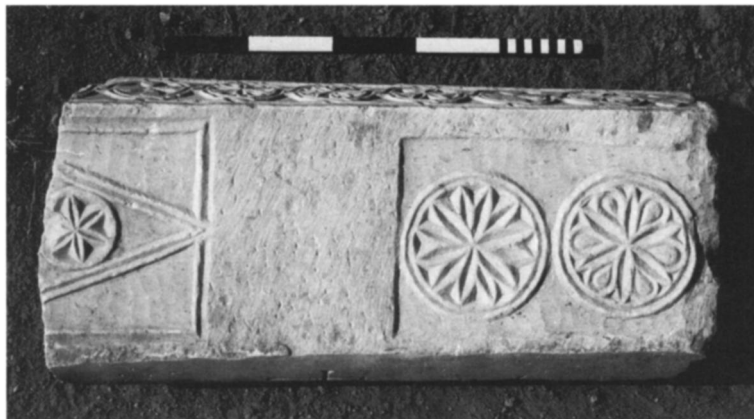


Fig. 24 T1646, templon epistyle fragment from village wall, underside with front at top (AMo2/14/04; photo: E. A. Ivison)

Fig. 25 T1647, templon epistyle fragment from village wall, front with proper right edge (AMo2/14/01; photo: E. A. Ivison)



from Amorium or its vicinity (fig. 26).⁵⁹ T952 is the left spandrel of an archivolt carved from fine white marble. The spandrel is decorated in low relief with a twisting vine (?) tendril; part of a single-line inscription survived on the raking cornice above. The letter forms and the style of the relief suggest a date in the tenth century.⁶⁰ T952 probably once served either as a *proskynetarion* for an icon or another feature, or once formed part of a canopy or ciborium raised over a shrine or altar.

Catalogue

T952: Spandrel fragment from archivolt, carved from white marble (fig. 26). Maximum preserved H(eight) 0.34 m; W(idth) 0.45 m; Th(ickness) 0.085 m (arch), 0.13 m (top). Estimated inner diameter of archivolt arch, ca. 0.74 m; estimated width of entire archivolt, 1.00–1.20 m; possible original height of archivolt, 0.70 m. Fragment of left spandrel and top of arch. Back of archivolt is chiseled flat and smooth. Front of spandrel filled with twisting vine (?) tendrils in shallow, raised relief. Raking cornice above slopes downward to the flat spandrel. A single dowel hole is partially preserved on upper edge of cornice. Cornice is carved with a fragmentary inscription. Letter heights, 4.5 cm; ligature (TH).

...]ΤΟΚΚΟΠΑΚΟΤΗ·ΤΟΚΤ[...
...]τ{φ} κ(ε)κοπιακότ{ι} τὸ κτ[ισμα (?)

T1630: Closure slab of gray breccia marble with reddish veins (fig. 15, left). Intact. L(ength) 0.80 m; H. 0.735 m; Th. 0.13 m. Found forming the lid of tomb 4 (Context 70). Front carved with rectangular panel framed by strapwork, enclosing a diamond panel with a plain frame. This plain frame also twists around two whorls, a rosette, and a star, set in the corner fields. A separate, central medallion containing a large whorl is enclosed by strapwork and framed by two ivy leaf buds. Dowel hole in left border.

T1631: Closure slab of gray breccia marble with reddish veins (fig. 15, center). Right corner missing. L. 0.82 m; H. 0.67 m; Th. 0.14 m. Found forming the lid of tomb 4 (Context 70). Layout of front similar to T1630, but with twisted strapwork enclosing the diamond panel and central whorl. Separate rosettes and star medallions fill the corner fields.

T1632: Half of a composite closure slab of gray breccia marble with red veins (fig. 15, right, and fig. 22, top). L. 0.46 m; H. 0.75 m; Th. 0.13 m. Found forming the lid of tomb 4 (Context 70). Iron cramp embedded in lead preserved below central medallion. Layout of front similar to T1630, but with twisted strapwork enclosing the diamond panel and a separate medallion at center. Large six-faceted rosette in center medallion, but lacking ivy-leaf buds. Separate rosettes and star medallions fill the corner fields.

T1633, T1634: Ionic impost capitals of gray breccia marble. L. 0.545–0.565 m; H. 0.285 m; W. 0.77 m. Found forming the south wall of tomb 4 (Context 71). After sixth-century type, with low volute capital and tall impost decorated with Latin crosses in relief. T1634 has a ligature carved on the impost composed of three Greek letters (ΥΤΡ).

T1635: Post fragment of gray breccia marble. H. 0.475 m; W. 0.19 × 0.175 m. Found forming the south wall of tomb 4 (Context 71). Fragment from top of post, front and side decorated with carved panel; sides undecorated. Dowel holes on top and two sides.



Fig. 26 T952, archivolt fragment from Emirdağ (AMo2/14/18; photo: E. A. Ivison)

⁵⁹ The fragment was “rescued” from Emirdağ by Recep Dinçer.

⁶⁰ L. Boura, *Ἡ γλυπτός διάκοσμος τοῦ ναοῦ τῆς Παναγίας στὸ μοναστήρι τοῦ Ὁσίου Λουκά* (Athens, 1980), 124, 127, pl. 15–42; for comparable inscriptions see C. Mango, “Byzantine Epigraphy (4th to 10th centuries),” in *Paleografia e Codicologia Greca: Atti del II Colloquio internazionale (Berlino-Wolfenbüttel, 17–21 ottobre 1983)*, ed. D. Harlfinger and G. Prato, (Alessandria, 1991), 245–46, figs. 25–27. The editors are grateful for the help of Professor Cyril Mango (Oxford) and Professor Alexander Alexakis (University of Ioannina) in elucidating this inscription.

T1636: Post fragment of gray breccia marble. H. 0.78 m; W. 0.19 × 0.175 m. Found forming the lid of tomb 4 (Context 70). Fragment from top of post, front and side decorated with carved panel; one side undecorated, the other with projecting pilaster. Hole with iron dowel on top.

T1637a, b: Gray marble rail in two joining pieces (fig. 23, top). Joined L. 1.81 m, W. 0.175 m; H. 0.25 m. Found forming the north wall of tomb 4 (Context 71). Beam carved with frieze of zigzags and Maltese crosses in circles. Top of rail decorated with cross and has an iron cramp at each end. Red paint was still visible in the carved decorations.

T1646: Templon epistyle fragment of white marble (fig. 24). Preserved L. 0.73 m; W. (front to back) 0.32 m; H. 0.09 m (front), 0.165 m (back). Capital setting: W. 0.26 × 0.19 m. Cut from a spolium column shaft; its curved surface is preserved at the back of the epistyle, together with a large cross.⁶¹ Fragment is from the middle of the epistyle, possibly once set over a doorway. Front face inclines from top border to bottom. Carving is shallow and cut out from a prepared surface. Traces of preparatory guidelines or *ordinatio* are visible. Front face decorated with a recessed panel with twisted strapwork enclosing raised medallions. The medallions enclose (from left to right) a rosette, a Greek cross with rounded terminals, a star, two rosettes, and another cross. On the underside is a recessed panel for siting a templon capital, and a recessed panel with strapwork enclosing a medallion.

T1647: Templon epistyle fragment of white marble, surfaces blackened by fire and damaged (fig. 25). Preserved L. 0.335 m; W. on top (front to back) 0.14 m; H. 0.20 m (front), 0.125 m (back). Fragment is the right-hand end of the epistyle beam. Front inclines from top to bottom and preserves right frame of a recessed panel, with twisted strapwork enclosing two raised medallions filled with stars and rosettes. Underside has tooled space on right side for setting of a templon capital.

T1664: Closure slab fragment of white marble, built into the west wall of tomb 3 (fig. 14). Preserved W. 0.50 m; H. 0.41 m; Th. 0.115 m. Corner of slab preserved and only one side visible. Plain frame encloses shallow, recessed panel containing part of trapezoid in twisted strapwork. Stylized palmette in corner field.

Animal Bones (E. Ioannidou)

This season's research on the assemblage of animal bones was initiated with an eleven-day pilot study.⁶² The aims of the work were to evaluate the potential of the assemblage, analyze a small sample, and look at special contexts and draw conclusions about the nature of the finds from them. The entire assemblage, recovered from 1988 to date, is very large and well preserved. Butchery marks are frequent, and many bones can provide sexing and aging information. The rate of fragmentation is relatively low, and consequently there is a representative sample of measurable bones. Smaller bones of larger mammals and small mammal and fish bones tend to be underrepresented, probably because relatively little sieving has been undertaken during excavation.

A total of 2,897 bones and bone fragments were examined in detail during 2002. These include three special contexts and an assemblage containing domestic refuse. When the bones from the special contexts are subtracted, and the rest divided according to their dating, the number of bones becomes too small to allow for a full analysis. Accordingly only a general description of the findings is attempted. Species proportions (NISP) are given, but it should be kept in mind that these results are provisional.

61 For other examples in the Afyonkarahisar Archaeological Museum, see Parman, *Ortaçağda Bizans Döneminde Frigya*, 99, no. A2, and 100, no. A5 (n. 5 above).

62 *Assemblage* here means all the material from the excavations for the years 1988 through 2002; for an earlier, brief survey of the material by John Giorgi, see *AnatSt* 43 (1993): 153.

From the sample examined, 432 bones and bone fragments came from Trench XC, Context 90, excavated in 1998 and dated to the mid-seventh century, and another 65 fragments were found in Trench XC, Context 42, which has been tentatively dated to the tenth century. Only ovicaprid, cattle, and pig bones have been identified from these contexts, except for a single horse bone and two bird bones from the mid-seventh century assemblage. On the whole, both groups are dominated by ovicaprid bones (81.8% for Trench XC, Context 90, and 66.0% for Trench XC, Context 42), the sheep/goat ratio being 1.9/1 and 1.3/1 respectively. The pig seems to have made a rather minor contribution to the diet during the mid-seventh century (10.5%) and even less in the tenth century (6.4%). Probably the most noticeable difference is the change in the cattle percentage, which increased from 7.7 percent in the mid-seventh-century deposit to 27.7 percent in the tenth century. Because of the small size of both assemblages, it is risky to attribute these variations to a real change in the economy of the site. A larger number of contexts and bones should be examined before anything of significance can be asserted.

Chop marks are very common on the bones, particularly on the vertebrae, indicating the use of knives and heavier tools, such as cleavers, to butcher the animals. The ovicaprids are rather large animals, and both horned and hornless sheep have been found. The aging data collected to date are not sufficient to reconstruct mortality profiles, but a general trend for ovicaprids to be slaughtered at an advanced age was observed, suggesting that wool production was a significant factor. Eleven pathological cases were recorded. Eight were ovicaprid oral diseases: pathologic roots, excessive wear, ante-mortem loss of tooth, periodontal disease, and missing teeth. Excessive bone growth was noted on three bones; a cattle third phalange, an ovicaprid first phalange, and an ovicaprid vertebra.

Special Deposits

1. Lower City Walls, Trench AB, Contexts 316, 325, 326, 330, 331, 336, layers within the triangular tower deposited before and during its destruction, which may be associated with the siege of 838⁶³

These bones were not analyzed in detail. Only a small sample, representative of all the species present, was selected for identification (45 bones). The assemblage consisted mainly of rodent bones (*Meriones sp.*, *Microtus sp.*, *Allataga sp.*, *Cricetus sp.*). Some bones of very small birds, the size of a sparrow, were also found, as well as a few fish vertebrae/cranial elements, and one frog bone. Three duck-sized bird bone fragments and very few small fragments of large mammals were also encountered (classified in broad size categories: sheep-sized and cattle-sized).⁶⁴ Probably the large mammal and large bird bones were remains of domestic refuse intrusive to the rodent bone group. The fish bones may also have been of the same origins, or they may have come from human feces. The rodent and small bird bones were from whole skeletons. Only the phalanges and vertebrae were missing, most likely because they were too small to be recovered without wet-sieving. The bones were mostly complete and had no sign of breakage and/or digestion that could indicate that the assemblage was accumulated by owls or small carnivores. It was concluded that the deposit came from around a cesspit or feature of similar function, and that the rodents, birds, and frog lived and died there naturally.

2. Lower City outside the Enclosure Wall, Trench XA-2, Context 20, probably eleventh century (fig. 27)

63 See *AnatSt* 44 (1994): 110–11.

64 The remains of a duck and a swan have recently been reported from the excavations at neighboring Pessinus; see J. Devreker et al., “Fouilles archéologiques de Pessinonte: La campagne de 2003,” in 26. *Kazı Sonuçları Toplantısı*, 24–28 Mayıs 2004, Konya (Ankara, 2005), 1:86.

This was a thick, packed layer of small bones from which about half was lifted. It contained 1,971 lamb bones, 1 goat metacarpal, 1 sheep mandible, 1 cattle carpal, 1 cattle-sized long bone fragment, and 78 very small fragments of sheep-sized animals. The deposit appears to contain industrial waste mixed with a small amount of food refuse. The lamb bones were all metapodial elements (phalanges, metacarpals, metatarsals). A minimum of 142 individuals was counted. There can be no doubt that these represent waste from lambskin processing. What makes the deposit more interesting is that the lambskins processed there were from unborn and newborn animals. Lambskin was used for fine-quality parchment, but the animals present in this context were too young and therefore too small to provide a sufficient amount of skin for use as parchment to justify their slaughter. The product of this industry might have been very fine and soft leather and/or fur, perhaps astrakhan or similar to astrakhan. A few fragments of *murex* sp. shells, typically used for the extraction of purple dye, were also found and they, too, may point to the production of fine leather/fur for luxury clothing items, which presumably were made for the local aristocracy or senior members of the clergy.

3. Lower City Enclosure, Trench XC, Context 139, from the vaulted room (probably used originally as the latrine of the bathhouse, Structure 1, fig. 1, room La), eleventh century⁶⁵

Ovicaprids and sheep-sized fragments account for 9.7 percent; 0.6 percent comes from pig and pig-sized animals. 89.7 percent of the assemblage is made up of cattle and cattle-sized bones. Although the assemblage appears to contain the “burial” of two animals, it is far from certain that this is the case. Most of the skeletal elements were identified, but not one complete skeleton. Probably some of the bones were destroyed, missed, or never deposited there. Among the missing bones are the mandibles and metatarsals, which are neither too fragile to have been destroyed completely nor too small to have been lost during excavation. Few bones are complete, most are fragmented, and none were found articulated. Moreover, few of them bear butchery marks (three cattle and two cattle-sized bones). The number of marks is very low, but they cannot be ignored. Also some of the bones (some 16 examples) display evidence of burning. The burning was neither intensive nor extensive. Black or black-and-white patches were found, often around the epiphyseal ends and more rarely on the shaft of long bones. In one case the bone had taken on a brownish color. Such burning is likely to be the result of the bones’ limited contact with fire, as if they had been cooked on a spit or thrown into an almost extinguished fire after being consumed/defleshed. The existence of human bones belonging to two men and one woman in the same context is puzzling and attests to exceptional circumstances.⁶⁶ It is difficult to explain how the deposit was formed, particularly because the bones lay on a floor surface and therefore this is not a rubbish heap. The examination of the rest of the bones and other finds from the surrounding contexts may provide more clues.



Fig. 27 Trench XA, general view looking west southwest with tannery in foreground; remains of Context 20 arrowed to right behind partition wall (AM02/02/18; photo: C. S. Lightfoot)

65 See *DOP* 58 (2004): 361–62.

66 J. A. Roberts, “Remains from Trench XC Context 139, 2001,” in Lightfoot, *Amorium Reports*, 2:171–73 (n. 31 above).

The Coins (C. S. Lightfoot)

Over the past two seasons, the quantity of coin finds at Amorium has greatly increased.⁶⁷ Between 1987 and 2000, 309 coins were found and recorded. To this list another 76 specimens were added in 2001, and this season's work produced a bumper crop of no less than 125 coins, making a grand total to date of 510. All these coins have been cleaned, conserved, and studied.⁶⁸ Casts were made when appropriate, which allowed for identifications during the postexcavation season of some of the more intractable and badly corroded specimens. Sadly, however, only 75 of the coins found in 2002 have been positively identified to date, although it is hoped that further work will reveal the nature of some at least of the remaining finds. The identified coins from 2002 range in date from the fourth to the twelfth century; all are bronze or copper alloy. There are 8 coins of the late Roman period, including a nummus of Leo I (457–474); the latest coin is an early Seljuk issue of Süleyman Shah under Kılıç Arslan II (1156–1192), depicting a horseman on the obverse.⁶⁹ The remaining 66 specimens are Byzantine: 9 issues of the sixth century, 9 of the Dark Ages (ca. 650–800), 4 of the first half of the ninth century, 11 of the tenth; the rest, numbering 33 coins, are either anonymous or signed folles.

Here I will focus on the coins from the Dark Ages and the early ninth century, since such issues are rarely found in archaeological contexts. In addition to the issue of Constans II (641–668) from the praefurnium of the bathhouse and the follis of Leo IV from sondage 5 in the polygonal hall (figs. 28–29; see above, pp. 239 n. 21 and 235 n. 10, respectively), there are five other coins from Trench XC. These include a decanummius of Constantine IV (668–685), a follis from the second reign of Justinian II (705–711), and a follis of Constantine V (741–775; figs. 30–31).⁷⁰ It is perhaps surprising that the 2002 season did not produce any more issues of Theophilos to add to the eleven found in previous seasons, but the finds did include a follis of Nikephoros I (802–811; figs. 32–33), two of Leo V (813–820), and one of Michael II (820–829), all from contexts within the Enclosure.⁷¹ These may now be added to the finds from 2001, which included a follis of Nikephoros I (SF4199, from Trench XC, Context 241) and another of Michael II (SF4182, from Trench XC, Context 213). The occurrence of a number of early-ninth-century issues in the area of Trench XC is noteworthy, particularly because three seasons of intensive excavation in this trench have not produced a single coin of the second half of the ninth century.⁷² The numismatic evidence therefore suggests that this central part of the site lay unoccupied for a considerable period of time and that Amorium was slow to recover from the traumatic events of 838. This hypothesis is not contradicted by any of the other archaeological or literary evidence.

70 SF4427: AE decanummius, class 2 of Constantine IV, dated 674–85; 24–22 mm; 3.67 g; ?h; *DOC* 39; SF4382: AE follis, class 2 of Justinian II, dated 705/6; 18 mm; 2.85 g; 6h; *DOC* 12; SF4394: AE follis, class 3 of Constantine V, dated 751–69 (?); 18–16.5 mm; 0.92 g; 6h; *DOC* 11. The other two coins from Trench XC are very worn and indistinct, but their triangular flans, facing busts, and large K indicate that they belong in the Dark Age; the remaining two Dark Age issues were stray finds from the surface.

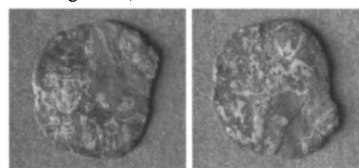
71 SF4441: AE follis, class 2, of Nikephoros I (802–811); 23–21 mm; 6.08 g; 6h; *DOC* 5; SF4421: AE follis, class 2, of Leo V (813–820); 23.5–21 mm; 6.08 g; 6h; *DOC* 7; SF4386: another AE follis, class 2 of Leo V; 22.5–21 mm; 4.53 g; 6h; SF4361: AE follis, class 1, of Michael II, dated 821; 23.5–20.5 mm; 4.08 g; 6h.

72 The numismatic finds from 2002 pick up again in the joint reign of Romanos I (920–944) and Constantine VII (913–959), but of the 7 coins recorded, only one was found in the Enclosure area.

Figs. 28–29 Obverse and reverse of SF4500, Leo IV, dated 778–80, from Trench XC, sondage 5 (digital image: C. S. Lightfoot)



Figs. 30–31 Obverse and reverse of SF4394, Constantine V, dated 751–69 (?), from Trench XC, Context 374 (digital image: C. S. Lightfoot)



Figs. 32–33 Obverse and reverse of SF4441, Nikephoros I (802–811), from Trench XC East, Context 21 (digital image: C. S. Lightfoot)



67 For earlier coin reports, see *AnatSt* 40 (1990): 215–16; 43 (1993): 153–54; 44 (1994): 123; 45 (1995): 132–33, and 137–38; 46 (1996): 104–5; *DOP* 52 (1998): 331–32; 53 (1999): 338–40.

68 The cleaning and conservation of the coins were expertly undertaken by Serhat Karakaya, while Dr. Constantina Katsari assisted in the identification and recording of the material.

69 SF4416: AE4, class 1 of Leo I (457–74); 9–8.5 mm; 1.04 g; ?h; *DOC* 565–70; SF4436: AE; 21–17.5 mm; 2.98 g; ?h; see R. Ashton, C. Lightfoot and A. Özme, “Ancient and Mediaeval Coins in Bolvadin (Turkey),” *Anatolia Antiqua/Eski Anadolu* 8 (2000): 172–73 and 187, no. 228.

Concluding Remarks

It is appropriate to put in context the impressive discoveries at Amorium in light of a number of recent publications. Two major surveys of the Byzantine world have appeared in English in the last few years, one published in Britain, the other in the United States.⁷³ They may be taken as representative of the present state of scholarship and knowledge regarding “the Byzantine city.” In neither volume, however, does Amorium figure prominently, which emphasizes the significance of the excavations at the site as a major new source of evidence.⁷⁴ In *The Economic History of Byzantium*, it is lamented that “the archaeological picture of important cities of the empire...is disappointing, while there are small provincial centers...that happened not to be inhabited at a later date, could thus be excavated systematically and without pressure, and have produced impressive results.”⁷⁵ The work at Amorium has in fact shown that the site is as productive for Byzantine archaeology and as undisturbed by later occupation as any of the smaller sites on the empire’s periphery. Results from the fourteen excavation seasons have also demonstrated that the area first enclosed by fortifications in the late fifth or early sixth century remained an integral part of the city well into the middle Byzantine period (i.e., the latter part of the 11th century).⁷⁶ Indeed, it may be suggested that there is evidence for increased density of occupation at least in the center of the site during the Byzantine Dark Ages, while no evidence has yet been found for abandoned plots or gardens within the circuit of walls around the Lower City. In middle Byzantine times, we also find renewed building; this includes the construction of the massive wall around the Enclosure, as well as domestic and commercial buildings immediately outside it. Large areas of the site became open land for grazing or fields for cultivation only after the departure of its Byzantine inhabitants.⁷⁷ On the other hand, the irregular plan of buildings in tightly packed units, encroaching on open squares, exploiting in various ways existing buildings or ruins, and without any well-defined streets, fits well with the evidence that can be gleaned from other Byzantine cities.⁷⁸ The evidence for the use of spolia at Byzantine Amorium is, of course, ubiquitous.

Likewise the identification of a tannery in one of the buildings near the Enclosure at the center of the site provides important new evidence for the location and nature of manufacturing activities in a provincial city and seems to confirm the view that such workshops were located between houses.⁷⁹ This discovery complements the excavation of a potter’s kiln within the circuit of

73 C. Mango, ed., *The Oxford History of Byzantium* (Oxford, 2002), and A. E. Laiou, ed., *The Economic History of Byzantium* (n. 23 above; hereafter *EHB*).

74 Amorium features as a site plan in Mango, *Oxford History*, 200, while in the *EHB* there is only a brief reference to its fortifications; see Bouras, “Aspects of the Byzantine City,” 507 and n. 97 (n. 23 above).

75 Bouras, “Aspects of the Byzantine City,” 499. Bouras lists Thessalonike, Nicaea, and Corinth as examples of “important cities,” while Kherson, Preslav, and Turnovo are seen as model sites on the periphery.

76 In another chapter in the *EHB*, the work is summarized as follows: “At Amorion the intent of current excavations is to show that the city suffered a specific fate. Although the city withdrew inside its ramparts during the sixth century and witnessed stagnation to some degree, it was not abandoned; its destruction took place in 838 when the Arabs captured and burned the city”; see C. Morrisson and J.-P. Sodini, “The Sixth-Century Economy,” in *EHB* 1:191 and n. 117. This is a distorted or, at best, an outdated interpretation of the aims and results of the Amorium Excavations Project. For a similar misleading view of the fate of Amorium as a middle Byzantine city, see J. H. W. G. Liebeschuetz, *The Decline and Fall of the Roman City* (Oxford, 2001), 292 (wrongly named throughout as “Armorium”).

77 The evidence for such empty plots at other cities is slight. Even the reference in Kantakouzenos, quoted by C. Bouras, to the situation at Thessalonike may be open to different interpretations—lack of houses in an area could imply an industrial quarter: Bouras, “Aspects of the Byzantine City,” 507–8 and n. 108. Compare the “huts for commercial purposes” mentioned at Constantinople in 1042; see *ibid.*, 514.

78 *Ibid.*, 508–10.

79 *Ibid.*, 515. Tanneries elsewhere, however, are placed “outside the cities”; *ibid.*, 519.

walls on the Upper City mound in 1995.⁸⁰ Both trades are, perhaps, unexpected “guests” in an intramural context, but they stand beside the other evidence for small industrial units scattered across the site. The picture of domestic occupation, however, fits the accepted view of life in a middle Byzantine city. Amorium has a plethora of wells (one positioned within the Dark Age bathhouse), while several storage jars sunk into floors have been excavated over the years, and a larger semi-basement storeroom was excavated immediately outside the Enclosure wall in 2001.⁸¹ Gradually, therefore, we are getting a clearer picture of living conditions in Byzantine Amorium, and this in turn is shedding significant new light on the nature of the urban environment in Byzantine times.

80 As recorded in the preliminary report for 1995: *DOP* 51 (1997): 299 and fig. 9. This kiln should be added to the list of workshops identified during excavations at Byzantine sites; see Bouras, “Aspects of the Byzantine City,” 516–17. The author of another recent publication introduces his work as “the first book to discuss Byzantine pottery as a whole” and emphasizes the important contribution that archaeology, and more specifically pottery studies, can and should make to our understanding of the Byzantine world; see K. Dark, *Byzantine Pottery* (Stroud, 2001), see esp. 7 and 18–20. It is therefore surprising that Dark makes no reference to the significance of the excavations at Amorium.

81 Compare the comments in Bouras, “Aspects of the Byzantine City,” 522–23.